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Result No.	Score	Query	Query Match Length DB	BB	ID	Description	ption
1	1214	100.0	225	5	Q9U6Y8	Q9и6y8	discosoma s
N	1085.5	89.4	230	տ	Q9GTJ7	Q9gtj7	discosoma s
w	793	65.3	221	ហ	Q95P04	Q95p04	goniopora t
4	729.5	60.1	232	ហ	Q9U6Y7	Q9u6y7	discosoma s
ű	690	56.8	225	տ	Q963F5	Q963£5	montastraea
6	681	56.1	225	σ	Q95UA7	Q95ua7	montastraea
7	681	56.1	225	ហ	Q7Z0W4	Q7z0w4	montastraea
80	679.5	56.0	227	v	Q7Z0W6	Q7z0w6	montastraea
9	678.5	55.9	227	IJ	Q962P9	Q962p9	montastraea
10	678.5	55.9	227	v	Q7Z0W8	Q7z0w8	montastraea
11	678	55.8	225	σ	Q7Z0W5	Q7z0w5	montastraea
12	669.5	55.1	234	ហ	Q7Z0W7	Q7z0w7	montastraea
13	668.5	55.1	234	Ŋ	Q8T5F2	Q8t5f2	montastraea
14	667	54.9	266	ഗ	Q9U6Y3	Q9u6y3	clavularia
15	663	54.6	236	ហ	Q8T6U0	Q8t6u0	dendronepht
16	655.5	54.0	227	л		095010	mont act race

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ALIGNMENTS

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PRT; 225 AA. Created) Last sequence update) Last sequence update) Last sequence update) a; Anthozoa; Zoantharia; Corallimorpha 504696; bas Y.A., Savitsky A.P., Zaraisky A.G.; (1999). bas Y.A., Savitsky A.P., Zaraisky A.G. c.; (1999). bas Y.A., Savitsky A.P., Zaraisky A.G. c.; (1999). thways; IEA. ke. c. thways; IEA. ke. protein; 1. protein;	va	229; GFLUORESCE 3756; Green fl 25 AA; 25931 M	3; GFP; 1.	R009017; GFP_1i	6-DEC-00.	7-NOV-01.	EB-2000) to the	, Lukyanov S.A	radkov A.F., La	N N	mol. 17:969-973	proteins from	Lukyanov S.A	radkov A.F. La)M N.A. 16614; PubMed=10	_	16600;	lae; Discosoma.	etazoa: Cnidari	protein FP583.	(TrEMBLiel. 25,	(TrEMBLinel 13	(TrEMBLiel 13.	PRELIMINARY;	-
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Best Local S
Matches 199
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EMBL; AF272711; AAG16224.1; -. HSSP; P42212; 1BFP.

GO; GO:006091; P:energy pathways; IEA. InterPro; IPR009017; GFP_like.

InterPro; IPR000786; Green_fl_protein.
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01-MAR-2001 (TrEMBLrel. 16, C:
01-MAR-2001 (TrEMBLrel. 16, L:
01-OCT-2003 (TrEMBLrel. 25, L:
Red fluorescent protein.
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PRINTS; PR01229; GFLUORESCENT.
ProDom; PD013756; Green fl_protein; 1.
ProDom; PD013756; Green fl_protein; 1.
ProDom; PD013756; Green fl_protein; 1.
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01-MAY-2000
01-OCT-2003
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GO; GO:0006091; P:energy pathways; IEA.
InterPro; IPR0009017; GFP like.
InterPro; IPR0009086; Green_fl_protein.
Pfam; PF01153; GFP; 1.
ProDom; PD013756; Green_fl_protein; 1.
ProDom; PD013756; Green_fl_protein; 1.
              PRINTS; PRO1229; GFLUORESCENT.
PRODOM; PD013756; Green_fl_protein; 1.
SEQUENCE 232 AA; 26435 MW; AA8F18EEE283CE4D CRC64;
                                                                    "Fluorescent proteins from nonbioluminescent Nat. Biotechnol. 17:969-973 (1999).
                                                                                                                                                                                              Matz M.V., Fradkov A.F., Labas
Markelov M.L., Lukyanov S.A.;
                                                                                                                                                                                                                                                                                                                     Fluorescent protein FP483.
Discosoma striata.
Eukaryota, Metazoa, Cnidaria,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           proteins(1).";
FEBS Lett. 507:16-20(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=21538626; PubMed=11682051;
Gurskaya N.G., Fradkov A.F., Terskikh A., Matz M.V., Labas Martynov V.I., Yanushevich Y.G., Lukyanov K.A., Lukyanov S...
"GFP-like chromoproteins as a source of far-red fluorescent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Goniopora tenuidens.
Eukaryota; Metazoa; Cnidaria; Anthozoa;
Fungiina; Poritidae; Goniopora.
NCBI_TaxID=75301;
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01-DEC-2001 (TrEMBLrel.
01-OCT-2003 (TrEMBLrel.
                                                                                                                                                                                                                                MEDLINE=99436614; PubMed=10504696;
                                                                                                                                                                                                                                                                                  NCBI_TaxID=105400;
                                                                                                                                                                                                                                                                                                                                                                                                                                    Q9U6Y7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q9U6Y7
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44; Conservative
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                                                                                     Green_fl_protein
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Pred. No. 1.4e
25; Mismatches
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Last annotation updat
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Anthozoa

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Best Local S
Matches 120
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Falkowski P., Gorbunov M., Kolber Z.;
"Green fluorescent proteins in Caribbean Scleractinian co
Submitted (AUG-2001) to the EMBL/GenBank/DDBJ databases.
EMBL; AF384683; AAK62982.2; -.
GO; GO:0006091; P:energy pathways; IEA.
InterPro; IPR0009017; GFP like.
InterPro; IPR000786; Green_fl_protein.
Pfam; PF01353; GFP; 1.
PRINTS; PR01229; GFLUORESCENT.
PRODOM; PD013756; Green fl_protein; 1.
SEQUENCE 225 AA; 25847 MW; 77DE7D7C616929AF CRC64;
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Best Local Similarity
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Q963F5;
01-DEC-2001
  Q95UA7
Q95UA7;
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Eukaryota; Metazoa; Cnidaria; Anthozoa;
Faviina; Faviidae; Montastraea.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
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                                                                                                                                                                                                                                                                                                                                                                                                             QYGSKYYVKHPADIPDYKKLSFPEGFKWERVMNFEDGGVVTVTQDSSLQDGCFIYKVKFI 125
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                                                                                                                                                                  RVQLPDYHFVDHRIEILSHDNDYNTVKLSEDAEARYSM
                                                                                                                                                                                                            PVQLPGYYYVDSKLDITSHNEDYTIVEQYERTEGRHHL 223
                                                                                                                                                                                                                                                                                                                                                                              QYGNRVFTKYPDDIPDYFKQTFPEGYSWERIMAYEDQSICTATSDIKMEGDCFIYEIQFH
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to the EMBL/GenBank/DDBJ databases.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       56.8%; Score 690; DB 5; Length 225; 55.0%; Pred. No. 2.9e-54;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   44;
                              PRT;
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RESULT 7
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"Montastraea cavernosa fluorescent protein.";
Submitted (SEP-2001) to the EMBL/GenBank/DDBJ
EMBL; AY056460; AAL17905.1; -
GO; GO:0006091; Penergy pathways; IEA.
InterPro; IPR0009017; GFP like.
InterPro; IPR009017; GFP like.
InterPro; IPR009017; GFP; 1.
                                                                                                                                                                                                                                                                        MEDLINE=22689801; PubMed=12777529;
Kelmanson I.V., Matz M.V.;
"Molecular Basis and Evolutionary Origins of Color Diversity
Star Coral Montastraea cavernosa (Scleractinia: Faviida).";
Mol. Biol. Evol. 20:1125-1133(2003).
EMBL, AY101557; AA0061603.i; -
SEQUENCE 225 AA; 25827 MW; A600ADD716C5921E CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Montastraea cavernosa (great star coral).
Eukaryota, Metazoa, Chidaria, Anthozoa, Z
Faviina, Faviidae, Montastraea.
NCBI_TaxID=63558;
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PRINTS; PR01229; GFLUORESCENT.
ProDom; PD013756; Green fl protein;
NON TER 225 225
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Eukaryota; Metazoa; Cnidaria; Anthozoa;
Faviina; Faviidae; Montastraea.
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01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-DEC-2003 (TrEMBLrel. 25, Last annotation update)
cyan fluorescent protein (Fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Green fluorescent protein.
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01-OCT-2003
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                                                                                                                        al Similarity 54.0
119; Conservative
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Similarity
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Last annotation update)
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                                                                                                                    Score 681; DB 5;
Pred. No. 1.9e-53;
2; Mismatches 57
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Best Local Similarity
Matches 120; Conserv
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Q962P9;
01-DEC-2001
01-DEC-2001
                                                                          Green fluorescent protein.
Montastraea faveolata.
Bukaryota, Metazoa; Chidaria; P
Faviina; Faviidae; Montastraea.
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01-OCT-2003 (TrEMBLrel. 25, Last sequence
01-OCT-2003 (TrEMBLrel. 25, Last annotation of the control of 
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01-DEC-2001 (TrEMBLrel. 19,
01-OCT-2003 (TrEMBLrel. 25,
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"Molecular Basis and Evolutionary Origins of Color Diversity
"Molecular Basis and Evolutionary Origins of Color Diversity
Star Coral Montastraea cavernosa (Scleractinia: Paviida).";
Mol. Biol. 20:1125-1133 (2003).

EMBL; AY181555; AAO61601.1; -
SEQUENCE 227 AA; 26055 MW; 4BE2CB64FDB0E890 CRC64;
       SEQUENCE FROM N.A
                                                NCBI_TaxID=48498;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KFIGVNFPSDGPVMQKKTMGWEASTERLYPRDGVLKGEIHKALKLKDGGHYLVEFKSIYM 182
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InterPro; IPR0009017; GFP_like.
InterPro; IPR000786; Green_fl_protein.
Pfam; PF01353; GFP; 1.
Probom; PD013796; Green_fl_protein; 1.
SEQUENCE 227 AA; 26017 MW; 5E312C54EA47F589 CRC64;
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MO1. Biol. Evol. 20:1125-1133(2003).
EMBL; AX181553; AA061599.1; -
SEQUENCE 227 AA; 26017 MW; 5E3120
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Kelmanson I.V., Matz M.V.;
"Molecular Basis and Evolutionary Origins of Color Diversity
"Molecular Basis and Evolutionary Origins of Color Diversity Origins of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Cnidaria; A
Faviina; Faviidae; Montastraea.
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Eukaryota; Metazoa; Cnidaria; Anthozoa;
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Falkowski P., Gorbunov M.,
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     AKKPVQLPGYYYVDSKLDITSHNEDYTIVEQYERTEGRHHL
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Q1-CCT-2003 (TrEMBLrel. 25,
Q1-CCT-2003 (TrEMBLrel. 25,
                                                       Kelmanson I.V., Matz M.V.;

Molecular Basis and Evolutionary Origins of Color Diversity
Star Coral Montastraea cavernosa (Scleractinia: Faviida).";

Mol. Biol. Evol. 20:1125-1133 (2003).

EMBL, AY181554; AA061600.1; -
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Eukaryota; Metazoa; Cnidaria; Anthozoa;
Faviina; Faviidae; Montastraea.
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"Molecular Basis and Evolutionary Origins of Color Diversity
Star Coral Montastraea cavernosa (Scleractinia: Faviida).";

Mol. Biol. Evol. 20:1125-1133(2003).

EMBL; AY181556; AAO61602.1; -
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Montastraea cavernosa (great star coral)
Eukaryota; Metazoa; Cnidaria; Anthozoa;
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01-0CT-2003 (TrEMBLrel. 25, Last sequence update)
01-0CT-2003 (TrEMBLrel. 25, Last annotation update)
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                                                                                                                                      MEDLINE=22689801; PubMed=12777529;
                                                                                                                                                                                               NCBI_TaxID=63558;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .556; AAC61602:1; -.
225 AA; 25843 MW; 13708587B7D93E35 CRC64;
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                                             AA;
55.1%;
53.6%;
                                             26813 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          55.8%; Score 678; 56.7%; Pred. No. 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           36; Mismatches
                                                                                                                                                                                                                                                                       Created)
Last sequence update)
Last annotation update)
 Score
Pred.
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                                                                                                                                                                                                                                                                                                                                      PRT;
                                             A7BBDE9F79CA8A70 CRC64;
 669.5; DB 5
                                                                                                                                                                                                                                                                                                                                      234
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                                                                                                                                                                                                                              Zoantharia; Scleractinia;
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               Length 234;
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RESULT 14
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Best Local Similarity
Matches 118; Conserv
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01-JUN-2002
01-JUN-2002
01-OCT-2003
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Lukyanov K.A., Lukyanov S.A., Matz M.V.;
"Diversity and evolution of the green fluorescent protein
Proc. Natl. Acad. Sci. U.S.A. 99:4256-4261(2002).
EMBL; AY037769; AAK71335.1; -.
EMBL; AY037769; AAK71335.1; -.
EGO:0006091; P:energy pathways; IEA.
InterPro; IPR009017; GFP like.
InterPro; IPR000786; Green fl protein.
Pfam; PF01353; GFP; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRINTS; PR01229; GPLUORESCENT.
ProDom; PD013756; Green_fl_protein; 1.
SEQUENCE 234 AA; 26743 MW; C62C39EC8063A24D CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Montastraea cavernosa (great star coral)
Eukaryota; Metazoa; Cnidaria; Anthozoa;
Faviina; Faviidae; Montastraea.
NCBI_TaxID=63558;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
MEDLINE=21927629; PubMed=11929996;
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                                                                                                                                                                                                                                                                                                                                                                                                                                            FQYGSKVYVKHPADIPDYKKLSFPEGFKWERVMNFEDGGVVTVTQDSSLQDG----CFIYK 121
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    55.1%; Score 668.5; DB 5 ilarity 53.2%; Pred. No. 2.7e-52; Conservative 47; Mismatches 54
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Last annotation update)
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Q9U6Y3; Q9U6Y3; 01-MAY-2000

(TrEMBLrel. PRELIMINARY;

13,

Created)

PRT;

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01-MAY-2000 (TrEMBLrel. 13, Last 01-OCT-2003 (TrEMBLrel. 25, Last Fluorescent protein FP484. Clavularia sp. Eukaryota; Metazoa; Cnidaria; Al Clavulariidae; Clavularia.

Anthozoa; Alcyonaria; Alcyonacea;

(TrEMBLrel. 13, Last (TrEMBLrel. 25, Last protein FP484.

sequence update)
annotation update)

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RESULT 15
QRT6UD
ID QRT6UD
AC QRT6UD
AC QRT6UD
DT 01-JUDT 01-JUDT 01-OC
DE Green
OS Dendr
OC Bukar
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Best Local :
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"Fluorescent proteins from nonbioluminescent Ant Nat. Biotechnol. 17.969-973 (1999).
EMBL; AF168424; AAF03374.1; -.
GG; GO:0006091; P:energy pathways; IEA.
InterPro; IPR000786; Green fl_protein.
Pfam; PF01353; GFP; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q8T6U0;
01-JUN-2002
01-JUN-2002
                                                                                                                        Labas Y.A., Gurskaya N.G., Yanushevich Y.G., Fradkov A.F.,
Lukyanov K.A., Lukyanov S.A., Matz M.V.;
"Diversity and evolution of the green fluorescent protein family.",
Proc. Natl. Acad. Sci. U.S.A. 99:4256-4261(2002).

EMBL; AF420591; AAM10625.1; -.
EG; GO:006091; P:energy pathways; IEA.
InterPro; IPR000786; Green fl protein.
Pfam; PF01353; GFP; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Green fluorescent protein.
Dendronephthya sp. SSAL-2002.
Eukaryota; Metazoa; Chidaria; Anthozoa; Alcyonaria; Alcyonacea;
Nephtheidae; Dendronephthya.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-JUN-2002 (TrEMBLrel. 21, Created)
01-JUN-2002 (TrEMBLrel. 21, Last sequence update)
01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q8T6U0
                                                     SEQUENCE
                                                                                                      PRINTS;
                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A. MEDLINE=21927629; PubMed=11929996;
                                                                                                                                                                                                                                                                                                                                                                                                                                        Nephtheidae; Dendr
NCBI_TaxID=191210;
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                                                PRO1229; GFLUORESCENT.
PD013756; Green_fl_protein; 1.
E 236 AA; 26840 MW; CE1707C
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PD013756; Green_fl_protein; 1.
E 266 AA; 30450 MW; B4E97406E2708854 CRC64;
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  54.6%;
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Pred. No. 4.3e-52;
  Score
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663;
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182 VVQLPDYHFVDHRIEILSNDSDYNKVKLYEHGVARY 217
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                                                                                                              62
                                                                                                                                       66 QYGSKVYVKHPADIPDYKKLSFPEGFKWERVMNFEDGGVVTVTQDSSLQDGCFIYKVKFI 125
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                                                                     GVNFPSDGPVMQKKTMGWEASTERLYPRDGVLKGEIHKALKLKDGGHYLVEFKSIYMAKK
                                                                                                            HYGNRVFTEYPADITDYFKQSFPEGYSWERTWTYEDKGICTIRSDISLEGDCFFQNIRFN 121
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              GMNFPPNGPVMQKKTLKWEPSTEKLHVRDGLLVGNINMALLLEGGGHYLCDFKTTYKAKK
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cches 58;
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Search completed: July Job time : 47 secs 8 2004, 09:55:06

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Result
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Claim 20; Page 74-75; 86pp; English.

The present sequence is a novel fluorescent protein (nFP) encoded by the full-length cDNA drFP583; drFP583 was isolated from Discosoma sp. "red", a non-bioluminescent species of the Class Anthozoa. Fluorescent proteins can be used in fluorescent labeling, a useful tool for marking a protein, cell or organism of interest. Unlike other markers used in protein

markers used in protein

Novel fluorescent protein from non-bioluminescent Discosoma sp. red, useful for fluorescent labeling and as markers.

Nove	WPI;	Lukyanoy Ding L;	(CLON-)	11-DEC-	10-DI	15-ปี	WO20	Key Misc Misc	Disc	Anth	Disc	12-S 19-S	AAY99836	RESULT 1 AAY99836 ID AAY9983		L C	43	42	40	39	38	36	υ <u>ι</u> υ 4	33	32	30	29	28	26
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                             The
                                                                                               Claim 3;
                                                                                                                                                                                 Novel method for identifying a DNA sequence encoding fluorescent proteins from non-bioluminescent Anthozoa which are useful for fluorescent
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protein

The invention provides a nucleic acid encoding CC protein (II) that differs from the sequence fluorescent protein by at least one amino acid

functional red fluorescent of an Anthozoan red substitution, and with

Disclosure;

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85; 90pp; English

mutations

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ilarity 100.0%;
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                                                                                                                                                                                                                                                                                                                                           Tsien R;
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No. 6.4e-128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         <u>,</u>
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different

different fluorescent properties. The red fluorescent protein of invention can be expressed by standard recombinant methodology.

are

SSSSSSSSSSSSS

used a fluorescent markers and FRET partners. It is used for identifying protein protein interactions. (II) is also suitable for multiplexed fluorescent analysis and FRET-based applications using existing Aequorea fluorescent proteins. (II) has improved brightness, reduced spectral cross talk, and is rapidly and efficiently expressed in mammalian cells. The key mutations in the encoding nucleic acids provide improved folding, brightness, and create (II) with sharper, more defined excitation and emission peaks when expressed in mammalian cells. The present sequence represents an anthozoan fluorescent protein

Sequence 225 ₽,

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                                           Matches
                                                       Query Match
Best Local
                                            225;
 \vdash
                                                        Similarity
MRSSKNVIKEFMRFKVRMEGTVNGHEFEIEGEGEGRPYEGHNTVKLKVTKGGPLPFAWDI
             MRSSKNVIKEFMRFKVRMEGTVNGHEFEIEGEGEGRPYEGHNTVKLKVTKGGPLPFAWDI
                                            Conservative
                                                     100.0%;
                                            0
                                                     Score 1214; DB 4;
Pred. No. 6.4e-128;
                                            Mismatches
                                            0
                                                                 Length
                                            Indels
                                                                  225;
                                           0
60
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0

밁 δ 5 121 61 61 KVKFIGVNFPSDGPVMQKKTMGWEASTERLYPRDGVLKGEIHKALKLKDGGHYLVEFKSI LSPQFQYGSKVYVKHPADIPDYKKLSFPEGFKWERVMNFEDGGVVTVTQDSSLQDGCFIY LSPQFQYGSKVYVKHPADIPDYKKLSFPEGFKWERVMNFEDGGVVTVTQDSSLQDGCFIY

120

120

181 YMAKKPVQLPGYYYVDSKLDITSHNEDYTIVEQYERTEGRHHLFL 225

SagidNo:563 dr fP583

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ABB08834 standard; protein; 225 Ą

ABB08834;

29-MAY-2002 (first entry)

Yeast optimised RFP SEQ ID NO 17.

Yeast; red fluorescent protein; RFP; plant; transgenic; GFP; Saccharomyces cerevisiae; Nicotiana tabacum; Arabidopsis tha Escherichia coli; green fluorescent protein; biotechnology. Arabidopsis thaliana; biotechnology.

Anthozoa.

DE20001395-U1

15-MAR-2001

27-JAN-2000; 2000DE-02001395.

27-JAN-2000; 2000DE-02001395

(GPCB-) GPC BIOTECH AG

2002-228394/29

ABA95905, ABA95921, ABA95922

RESULT 4
ABB0834
ID ABB0
XX ABB0
XX ABB0
XX Yeas
KW Yeas
KW Sacc
KW Sacc
KW Esch
XX Antl
XX DE2(
XX Antl
XX An New DNA encoding red fluorescent prote biotechnology, has sequence optimized especially yeast or plants. mized for useful as marker in expression in eukaryotes

Disclosure; Page 13-14; 19pp; German.

The invention relates to DNA (I) containing either sequence ABA95905 sequence ABA95906 encoding a yeast optimised Red Fluorescent Protein (QRFP). (I) are used to express red fluorescent protein (RFP) in õ

> Ş 밁 á 문 Ş 뭐 S **និស្សិត្ត ស្ត្រីស្ត្រី និង** 밁 Best Loca Matches Query Match Best Local eukaryotes, especially yeast, especially Saccharomyces cerevisiae and plants, especially dicotyledonous plants including Nicotiana tabacum or Arabidopsis thaliana and also in prokaryotes, especially bacteria, especially Escherichia coli. RFP is useful in the same way as green fluorescent protein but is more generally applicable in modern biotechnology. (I) are optimised for expression in yeast and so generate RFP at higher levels with stronger fluorescence and thus lowers the detection limit and gives a better signal-to-noise ratio. The present sequence is that of the yeast optimised RFP Sequence 225 AA; 181 181 121 121 61 61 225; 1 MRSSKNVIKEFMRFKVRMEGTVNGHEFEIEGEGEGRPYEGHNTVKLKVTKGGPLPFAMDI Similarity LSPQFQYGSKVYVKHPADIPDYKKLSFPEGFKWERVMNFEDGGVVTVTQDSSLQDGCFIY YMAKKPVQLPGYYYVDSKLDITSHNEDYTIVEQYERTEGRHHLFL KVKFIGVNFPSDGPVMQKKTMGWEASTERLYPRDGVLKGEIHKALKLKDGGHYLVEFKSI 180 LSPQFQYGSKVYVKHPADIPDYKKLSFPEGFKWERVMNFEDGGVVTVTQDSSLQDGCFIY MRSSKNVIKEFMRFKVRMEGTVNGHEFEIEGEGEGRPYEGHNTVKLKVTKGGPLPFAWDI KVKFIGVNFPSDGPVMQKKTMGWEASTERLYPRDGVLKGEIHKALKLKDGGHYLVEFKSI Conservative 100.0%; VDSKLDITSHNEDYTIVEQYERTEGRHHLFL 0, Score 1214; Pred. No. 6.4 0; Mismatches 6.4e-128; BB 5 0 Indels Length 225 225 0 Gaps 180 120 120 60 60 0

AAE28833 standard; protein; 225 A

27-DEC-2002 (first entry)

Discosoma sp. drFP583 (NFP-6) wild-type protein.

Fluorescent protein; chromoprotein; protease cleavage assay; filter; fluorescence activated cell sorting application; fluorescent timer; biosensor; fluorescence, resonance energy transfer application; FRET; colouring agent; recombinant DNA application; analyte detection assa; sunscreen; second messenger detector; drfP583 protein; NFP-6 detection assay;

Discosoma

WO200268459-A2

06-SEP-2002

20-FEB-2002; 2002WO-US005749

21-FEB-2001; 2001US-0270983P 04-DEC-2001; 2001US-00006922

(CLON-) CLONTECH LAB INC

Lukyanov S, Lukyanov 7 Yanushevich Ķ, Savistky Þ Fradkov

N-PSDB; 2002-691654/74. AAD46278

RESULT 5
AAE28833
ID AAE2
AX AAE2
XX AAE2
XX Disc
XX Pluc
XX Fluc
XX Fluc
XX Elc
XX Elc
XX Elc
XX Disc
XX Disc
XX O6-4
XX O6-4
XX 20-1
XX 20-1
XX 21PR 04XX WPI
DR WPI New nucleic acid encoding a non-aggregating chromo- or fluorescent mutant of an aggregating Chidarian chromo- or fluorescent protein or mutant for analyte detection assays or fluorescence activated cell sorting applications.

Disclosure; Page 70-71; 80pp;

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ARESULT 6
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                                                                                                                                            New fluorescent timer proteins comprising an emission spectrum that changes over time from a first wavelength to a second wavelength, u
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 225
                           Example 1; Fig 1; 89pp; English
                                                                                                                                                                                                                                                                                                                              Fradkov
                                                                                                                                                                                                                                                                                                                                                                                        (CLON-)
                                                                                                                                                                                                                                                                                                                                                                                                                                            14-JUN-2000; 2000US-0211607P.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Fluorescent timer protein; protein movement; translocation; trafficking; promoter activity; gene expression; transgenic plant; gene modification;
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                                                                                     r monitoring intracellular protein movement, translocation, trafficking stability.
                                                                                                                                                                                                                                                                 2002-154595/20.
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anthozoa protein; drFP583
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Matches 225
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                                                                                                                                                                                                                                                                                                                                            Discosoma sp.
                                                                                                                                                                                                                                                                                                                                                                                                            Yeast; RAD54; promoter; genotoxicity cassette; cytotoxicity cassette; modified yeast strain; environmental pollution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Discosoma red fluorescent protein.
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                                                                   12-DEC-2000; 2000DE-01061872
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         26-SEP-2002 (first entry)
                                                                                                                                      12-DEC-2000; 2000DE-01061872
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   (LICH/) LICHTENBERG-FRATE H
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WPI; 2002-539633/58.

Lichtenberg-Frate H;

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             genotoxic and/or cytotoxic substances in complex environmental contaminants, especially organic compounds, but also (non-)ionising radiation and chemical carcinogens. Particular applications are in monitoring (waste) water (e.g. as an early warning system), medical toxicology screening and for industrial process control. The present
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          environment, communication compounds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      and a cytotoxicity cassette, each comprising a promoter and report
gene, both of which are different in the two cassettes. The modifi-
yeast strain is used to detect environmental pollution, especially
                                                                                                                                                                                                Phosphorylation indicator; fluorescent protein; detection; phosphatase; kinase; red fluorescent protein; RFP.
                                                                                                                                                                                                                                            Discosoma species
                                                                                                                                                                                                                                                                                                                                      AAE34962 standard;
                                             24-MAY-2001; 2001US-00865291
                                                                          24-MAY-2002; 2002WO-US016955
                                                                                                         28-NOV-2002.
                                                                                                                                     WO200295058-A2
                                                                                                                                                                  Discosoma sp
                                                                                                                                                                                                                                                                          28-MAY-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 225 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Disclosure; Page 21-22; 34pp; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The present invention relates to a modified yeast strain that contains, integrated stably and functionally in its genome, a genotoxicity casset
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  is a marker protein suitable for use in the cassettes of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             st strain, useful for detecting toxic compounds in contains integrated cassettes responsive to genotoxic and
                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                            red fluorescent protein (RFP)
                                                                                                                                                                                                                                                                                                                                    protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%;
                                                                                                                                                                                              protein;
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Pred. No. 6.4e-128;
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                                                                                                                                                                                                                                                                                                                                                                                                                              Discosoma red fluorescent protein; DsRed; AB interface; AC interface; fluorescent protein variant; transcription induction detection; fluorescence energy resonance transfer; FRET; protein kinase;
                                                                                        26-FEB-2001; 2001US-00794308.
24-MAY-2001; 2001US-00866538.
                                                                                                                                                                                                                                                                                                                                                                                                    protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Discosoma wild-type red fluorescent protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      18-DEC-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADC24126 standard; protein;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Disclosure; Col 65-66;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tsien
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(TSIE/) TSIEN R Y.
(CAMP/) CAMPBELL R E.
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                                                                                                                                                                                                                                                                                                                                                                                                    phosphatase; ion
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Pred. No. 6.4e-128;
; Mismatches 0;
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RESULT 10
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C propensity to oligomerise, comprising amino acid substitutions at the AB camino acids, given in the specification, where the substitutions at the AB camino acids, given in the specification, where the substitutions at the AB camino acids, given in the specification, where the substitutions at the AB camino acids, given in the specification, where the substitutions at the AB camino acids, given in the specification, where the substitutions result in reduced propensity of the DSRed variant to form tetramers. (I) is conatining a vector which comprises (I) operatively linked to an comprise on the control sequence, and an unit to assay the variant fluorescent protein fluorescence, and an unit to assay the variant fluorescent protein protein protein protein fluorescence of the variant fluorescent protein fluorescence is indicative of transcriptional activity. A polymucleotide localisation or trafficking of a polypeptide of interest. A polymucleotide marker is useful as markers to identify the location and amount of a target protein protein produced, where the target protein is fused to the marker, as a complement to or alternative for the green fluorescent protein or its spectral variant, for detecting induction of transcriptions, in complement to incomplement to the unction of the movement of fluorescent donors and acceptors towards or away from each other, for making contains an enzyme or for a marker and phosphatase activities or indicators for ions and molecules such as Ca2+, Zn2+, for identifying the presence of a molecule in a sample, for identifying a specific cuseful for identifying a region or condition that regulates the activity of an expression control sequence. This is the amino acid sequence of Discosoma wild-type red fluorescent protein.
                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                15-JAN-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Discosoma red
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 1; SEQ ID NO 1; 67pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Novel polynucleotide sequence encoding Discosoma red fluorescent protein variant having a reduced propensity to oligomerize, useful for detecting transcriptional activity.
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                                                                          standard;
                                                                                                                                                                        YMAKKPVQLPGYYYVDSKLDITSHNEDYTIVEQYERTEGRHHLFL
                                                                                                                                                                                                                                          KVKFIGVNFPSDGPVMQKKTMGWEASTERLYPRDGVLKGEIHKALKLKDGGHYLVEFKSI 180
                                                                                                                                                                                                                                                                                                                                            MRSSKNVIKEFMRFKVRMEGTVNGHEFEIEGEGEGRPYEGHNTVKLKVTKGGPLPFAWDI
                                                                                                                                                                                                                                                                                                                                                                        MRSSKNVIKEFMRFKVRMEGTVNGHEFEIEGEGEGRPYEGHNTVKLKVTKGGPLPFAWDI 60
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              (first entry)
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                                                                          protein;
                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%; Score 1214; DB 7; 100.0%; Pred. No. 6.4e-128;
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RESULT 11
ABB08821
ID ABB08
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AC ABB08
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DT 28-M2
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Autol
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Best Local &
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The invention relates to a non-oligomerising fluorescent protein containing a mutation that reduces or eliminates its ability to oligomerise. The fluorescent protein gives more reliable fluorescence resonance energy transfer results and are useful to detect molecule interaction, enzymes, or sample pH. These are also used to identify agents or conditions that regulate expression of control sequences. The present sequence is Discosoma sp. red fluorescent protein (RFP)
                                        Autofluorescent
                                                                               28-MAY-2002
                                                                                                                                                          ABB08821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Fluorescent proteins containing a mutation that reduces or eliminates ability to oligomerize which gives more reliable fluorescence resonance energy transfer results and are useful to detect molecule interaction,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 10; Page 30-31; Opp; English.
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(ZACH/) ZACHARIAS
(BAIR/) BAIRD G S.
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                                                                                                                                                            standard;
                                                                                                                                                                                                                                                                                  YMAKKPVQLPGYYYVDSKLDITSHNEDYTIVEQYERTEGRHHLFL
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                                                                                                                                                                                                                                                         YMAKKPVQLPGYYYVDSKLDITSHNEDYTIVEQYERTEGRHHLFL
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                                      fusion protein A
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                                                                                                                                                          protein;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 1214; DB 7;
Pred. No. 6.4e-128;
; Mismatches 0;
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                                        SEQ ID NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (RFP)
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fusion

protein;

proteolytic activity; fluorophore;

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RESULT 12
ABBO8822
ID ABBO8
XX ABBO8
AC ABBO8
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The invention relates to an autofluorescing fusion protein (I, ABB08821) comprising: (i) a first autofluorescing protein (Ia); (ii) a segment containing a protease cleavage site; and (iii) at least one different autofluorescing protein (Ib). Essentially no fluorescent energy transfer occurs between (Ia) and (Ib). (I) is used for detecting and quantifying protease (or protease-inhibitory) activity in liquid samples or cells, particularly for screening-based optimisation (or generation) of biomolecules with proteolytic activity. (I) can be prepared in cellular or cell-free systems and makes possible intracellular analysis of protease activity. Preparation of (I) does not require regioselective coupling of fluorophores to polypeptides and any selected protease cleavage site can be incorporated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New autofluorescent fusion protein, useful for determining protease and protease inhibiting activity, comprises two different proteins linked by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    07-AUG-2001; 2001WO-EP009112
               protease; assay; protease
                            Autofluorescent; fusion protein; proteolytic activity; fluorophore;
                                                             Autofluorescent
                                                                                          28-MAY-2002
                                                                                                                        ABB08822
                                                                                                                                                  ABB08822 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               protease cleavage site.
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                                                                                                                                                                                                                                                                                                         KVKFIGVNFPSDGPVMQKKTMGWEASTERLYPRDGVLKGEIHKALKLKDGGHYLVEFKSI 180
                                                                                                                                                                                                                                                 YMAKKPVQLPGYYYVDSKLDITSHNEDYTIVEQYERTEGRHHLFL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
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                                                                                        (first entry)
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                                                            fusion protein B
                                                                                                                                                    protein;
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100.0%; Pred. No. 2e-127;
tive 0; Mismatches 0;
               cleavage.
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                                        Autofluorescent; fusion protein; protease; assay; protease cleava;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 506 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New autofluorescent fusion protein, useful for determining protease and protease-inhibiting activity, comprises two different proteins linked by
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                                                                                 Autofluorescent fusion protein C SEQ ID NO
                                                                                                              28-MAY-2002
                                                                                                                                        ABB08823
                                                                                                                                                                   ABB08823 standard;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               protease cleavage site.
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                                       rotein; proteolytic activity; cleavage.
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                       Fluorescent protein; chromoprotein; protease cleavage assay; filter; fluorescence activated cell sorting application; fluorescent timer; biosensor; fluorescence resonance energy transfer application; FRET; colouring agent; recombinant DNA application; analyte detection assa sunsgreen; second messenger detector; drFP583 protein; NFP-6; mutant
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                                                                                                                                                                                                                                                                                                          YMAKKPVQLPGYYYVDSKLDITSHNEDYTIVEQYERTEGRHHLFL
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llarity 100.0%;
Conservative 0
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Pred. No. 2.4e-127;
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RESULT 15
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 useful in analyte detection assays, as colouring agents, as markers in recombinant DNA applications, as sunscreens or filters, in fluorescence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New nucleic acid encoding a non-aggregating chromo- or fluorescent mutant of an aggregating Chidarian chromo- or fluorescent protein or mutant for analyte detection assays or fluorescence activated cell sorting
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Synthetic.
                                          ABW00937;
                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
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                                                                                                                                                                                                                                                     LSPQFQYGSKVYVKHPADIPDYKKLSFPEGFKWERVMNFEDGGVVTVTQDSSLQDGCFIY
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                                                                    standard;
                                                                                                                                         YMAKKPVQLPGYYYVDTKLDITSHNEDYTIVEQYERTEGRHHLFL
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                                                                   protein;
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Pred. No. 1.4e
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Best Local Similarity 99.6
Matches 224; Conservative
                                                                                                                                                                                                                                                                                                                   The invention relates to a non-oligomerising fluorescent protein containing a mutation that reduces or eliminates its ability to oligomerise. The fluorescent protein gives more reliable fluorescence resonance energy transfer results and are useful to detect molecule interaction, enzymes, or sample pH. These are also used to identify agents or conditions that regulate expression of control sequences. The present sequence is Discosoma sp. red fluorescent protein (RFP) mutant. Note: This sequence is not shown in the specification, however this sequence is constructed based on Discosoma sp. wild-type RFP protein shown in page 30-31 (ABW00918)
                                                                                                                                                                                                                                                                                           Sequence 225 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pluorescent proteins containing a mutation that reduces or eliminates its ability to oligomerize which gives more reliable fluorescence resonance energy transfer results and are useful to detect molecule interaction,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Fluorescent protein; resonance energy transfer; pH; detection; red fluorescent protein; RFP; mutant; mutein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              enzymes, or sample pH.
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(ZACH/) ZACHARIAS D A.
(BAIR/) BAIRD G S.
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                  YMAKKPVQLPGYYYVDSKLDITSHNEDYTIVEQYERTEGRHHLFL 225
                                                          KVKFIGVNFPSDGPVMQKKTMGWEASTERLYPRDGVLKGEIHKALKLKDGGHYLVEFKSI
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Pred. No. 1.4e-127;
1; Mismatches 0;
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Search completed: July Job time : 61 secs

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Tsien, R.Y. and Gonzalez, J.E. Detection of transmembrane p Patent: WO 0142211-A 6 14-JU
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Discosoma sp.
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Corallimorpharia, Discosomatidae, Discosoma
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Discosoma sp.
Eukaryota; Metazoa; Chidaria; Anthozoa; Zoantharia;
Corallimorpharia; Discosomatidae; Discosoma.
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/mol_type="unassigned DNA"
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Submitted (14-JUL-1999) Moscow 117871, Russia
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On Feb 25, 2000 this sequence version
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Matz,M.V., Fradkov,A.F., Laba
Markelov,M.L. and Lukyanov,S.
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Markelov, M.L. and Lukyanov, S.A.
Fluorescent proteins from nonbioluminescent Anthozoa
Nat. Biotechnol. 17 (10), 969-973 (1999)
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Corallimorpharia; Discosomatidae; Discosoma.
1 (bases 1 to 859)
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                                                                                         GACTATAAAAAGCTGTCATTTCCTGAAGGATTTAAATGGGAAAGGGTCATGAACTTTGAA 300
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                    GACGGTGGCGTCGTTACTGTAACCCAGGATTCCAGTTTTGCAGGATGGCTGTTTCATCTAC 360
                                                                                                                                                                                                                                CACAATACCGTAAAGCTTAAGGTAACCAAGGGGGGGACCTTTGCCATTTTGCTTGGGATATT
                                                                                                                                                            TTGTCACCACAATTTCAGTATGGAAGCAAGGTATATGTCAAGCACCCTGCCGACATACCA
                                                                                                                                                                                                              CACAATACCGTAAAGCTTAAGGTAACCAAGGGGGGACCTTTGCCATTTGCTTGGGATATT
                                                                                                                                                                                                                                                                                 ACGGTCAATGGGCACGAGTTTGAAATAGAAGGCGAAGGAGAGGGGGAGGCCATACGAAGGC
                                                                                                                                                                                                                                                                                                                                                                         ATGAGGTCTTCCAAGAATGTTATCAAGGAGTTCATGAGGTTTAAGGTTCGCATGGAAGGA 60
 GACGGTGGCGTCGTTACTGTAACCCAGGATTCCAGTTTGCAGGATGGCTGTTTCATCTAC
                                                                     GACTATAAAAAGCTGTCATTTCCTGAAGGATTTAAATGGGAAAGGGTCATGAACTTTGAA
                                                                                                                                          TTGTCACCACAATTTCAGTATGGAAGCAAGGTATATGTCAAGCACCCTGCCGACATACCA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GRHHLFL"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /codon_start=1
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/protein_id="AAF03369.1"
/protein_id="AAF03367"
/db_xref="GI:6090867"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /mol_type="mRNA"
/db_xref="taxon:86600"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       note="GFP-like protein; orange-red"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       organism="Discosoma sp."
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                                                                                                                                                                                                                                                                                                                                                                                                                      Score 678; DB 3;
Pred. No. 7e-190;
; Mismatches 0;
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Eukaryota; Metazoa; Cnidaria; Anthozoa; Zoa
Corallimorpharia; Discosomatidae; Discosoma
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          ACGGTCAATGGGCACGAGTTTGAAATAGAAGGCGAAGGAGGGGAGGCCATACGAAGGC
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                                                                                                                                                                                                                     Conservative
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/db_xref="G1:RAM6458"
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/translation="MRSSKNVIKEFMRFKTV"
/translation="MRSSKNVIKEFMRFKTV"
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/translation="MRSSKNVIKEFMRFKTV"
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/translation="MRSSKNVIKEFMRFKTV"
/translation="MRSSKN
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/mol_type="unassigned DNA"
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                                                                                                                                                                                                       Gene expression, genome alteration and reporter gene expression in myofibroblasts and myofibroblasts-like cells by using the regulatory regions within the alpha smooth muscle alpha-actin gene Patent: EP 1172375-A 22 16-JAN-2002; Odenthal, Margarete (DE)
Location/Qualifiers
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 98.1%; Solitarity 100.0%; I Conservative 0;
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/mol type="unassigned DNA"
/mb xref="taxon:32630"
/noTe="Red Fluorescent Protein"
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Pred. No. 5e-186;
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Sequence
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                                                                                                                                                                                                                                                                        synthetic construct
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                                                                          /organism="synthetic construct"
/mol type="unassigned DNA"
/db xref="taxon:32630"
/noTe="Red Fluorescent Protein"
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Corallimorpharia; Discosomatidae; Discosoma.
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Laboratories Inc. (US)
Location/Qualifiers
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                /organism="Discosoma sp."
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/db_xref="taxon:86600"
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                                                                                              Fradkov,A.F., Labas,Y.A., d chromo/fluoroproteins a
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complete c
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                                   Discosoma sp. SSAL-2000
Discosoma sp. SSAL-2000
Discosoma sp. SSAL-2000
Eukaryota, Metazoa; Chidaria; Anthozoa; Zoantharia;
Corallimorpharia; Discosomatidae; Discosoma.

1 (bases 1 to 876)
Fradkov,A.F., Chen,Y., Ding,L., Barsova,E.V., Matz,
Lukyanov,S.A.
Novel fluorescent protein from Discosoma coral and
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Pred. No. 3.5e-184;
0; Mismatches 12;
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Matz, M.V.

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2 (bases 1 to 876) Fradkov, A.F., Chen, Y., Ding, L., Barsova, E.V.,
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GATATAACAAGCCACAACGAAGACTATACAATCGTTGAGCAGTATGAAAGAACCGAGGGA
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                                                                 TACATGGTAAAGAAGCCTTCAGTGCAGTTGCCAGGCTACTATTATGTTGACTCCAAACTG
                                                                                                     TACATGGCAAAGAAGCCT---GTGCAGCTACCAGGGTACTACTATGTTGACTCCAAACTG
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/codon_start=1
/product="red fluorescent protein"
/protein_id="AAG16224.1"
/protein_id="AAG16224.1"
/db_xref="GI:10304307"
/translation="MSCSKNVIKEFMRFKVRMEGTVNGHEFEIKGEGEGRPYEGHCSV
/translation="MSCSKNVIKEFMRFKVRMEGTVNGHEFEIKGEGEGRPFKMRFKNMEGTVNGHEFEIKGEGEGRPFKMRFKNMEGTVNGHEFEIKGEGEGRPFKMRFKNMEGTVNGHEFEIKGEGEGRPFKMRFKMRFKMRFKMRFK
/translation="MSCSKNVIKEFMRFKMRFK"
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Pred. No. 9.5e-157;
0; Mismatches 61;
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Sequence 17
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Corallimorpharia;
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Anthozoa derived chromo/fluoroproteins a
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                                                                                               ATTCATAAGGCTCTGAAGCTGAAAGACGGTGGTCATTACCTAGTTTGAATTCAAAAGTATT
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                                                                 ATCCATATGGCTCTGAGGCTGGAAGGAGGCGGCCATTACCTCGTTGAATTCAAAAGTATT
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i, Metazoa; Cnidaria; Anthozoa; Zoann
i, Metazoa; Discosomatidae; Discosoma.
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/mol_type="unassigned DNA"
/db_xref="taxon:86600"
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Pred. No. 9.5e-157;
0; Mismatches 61;
-GTGCAGCTACCAGGGTACTACTATGTTGACTCCAAACTG
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                                                                                                                             ACAATACCGTAAAGCTTAAGGTAACCAAGGGGGGACCTTTGCCATTTGCTTTGGGATATTT
                                                                                                                                                                     ACGGCGGCGTGGTGACCGTGACCCAGGACAGCAGCCTGCAGGACGGCTGCTTCATCTACA
                 ACGGTGGCGTCGTTACTGTAACCCAGGATTCCAGTTTGCAGGATGGCTGTTTCATCTACA
                                       ACTACAAGAAGCTGAGCTTCCCCGAGGGCTTCAAGTGGGAGAGGGTGATGAACTTCGAGG
                                                         ACTATAAAAAGCTGTCATTTCCTGAAGGATTTAAATGGGAAAGGGTCATGAACTTTGAAG
                                                                             TGAGCCCCCAGTTCCAGTACGGCAGCAAGGTGTACGTGAAGCACCCCGCCGACATCCCCG
                                                                                        TGTCACCACAATTTCAGTATGGAAGCAAGGTATATGTCAAGCACCCTGCCGACATACCAG
                                                                                                                   ACAACACCGTGAAGCTTAAGGTGACCAAGGGCGCCCCCTGCCCTTCGCCTGGGACATCC
                                                                                                                                                           CCGTGAACGGCCACGAGTTCGAGATCGAGGGCGAGGGCGAGGGCCCTACGAGGGCCC
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                                                                                                                                                                                                                                                                                                /translation="MVRSSKNVIKEFMRFKVRMEGTVNGHEFEIEGEGEGRPYEGHNT
VKLKVTKGGPLPFAWDILSPQFQYGSKYVVRHADIPDYKKLSPEGFKMERVMNEED
GGVVPTVTQBSSLQDGCGTYKVKETGRVNEPSDEPVMQKKTMGWEASTERLYFRDGVTKE
EIHKALKLKDGGHYLVEFKSIYMAKKPVQLPGYYYVDSKLDITSHNEDYTIVEQYERT
                                                                                                                                                                                                                                                                                         EGRHHLFL"
                                                                                                                                                                                                                                                                                                                                      /trans]_table=11
/protein_id="CAC69734.1"
/db_xref="REMTREMBL:CAC69734"
/db_xref="REMTREMBL:CAC69734"
                                                                                                                                                                                                                                                                                                                                                                                        note="unnamed protein
                                                                                                                                                                                                                                                                                                                                                                                                            note="Mutant Anthozoan red fluorescent protein"
                                                                                                                                                                                                                                                                                                                                                                                                                     organism="synthetic construct"

mol_type="unassigned DNA"

db_xref="taxon:32630"
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Patent W00162919
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Pred. No. 3.9e-122;
0; Mismatches 142;
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Patent: WO 0162919-A 51 30-AUG-2001;
Aurora Biosciences Corporation (US)
Location/Qualifiers
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Query Match
Best Local Similarity
Matches 535; Conserv
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Sequence 7 from I
AX824725
AX824725.1 GI:39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Discosoma sp.
Discosoma sp.
Eukaryota; Metazoa; Cnidaria; Anthozoa; Zoar
Corallimorpharia; Discosomatidae; Discosoma
                                                                                         CACAATACCGTAAAGCTTAAGGTAACCAAGGGGGGACCTTTGCCATTTGCTTGGGATATT
                                                                                                                                                                           ACGGTCAATGGGCACGAGTTTGAAATAGAAGGCGAAGGAGAGGGGAGAGGCCATACGAAGGC
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                                                                         CACAACACCGTGAAGGTGAAGGTGACCAAGGGCGCCCCTGCCCTTCGCCTGGGACATC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          aggregating fluorescent proteins ent: WO 02068459-A 7 06-SEP-2002;
                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Discosoma sp."
/mol_type="unassigned DNA"
/db_xref="taxon:86600"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
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Pred. No. 5.9e-122;
0; Mismatches 143;
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Search completed: July 11, 2004, 10:35:31 Job time : 2085 secs

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Sequence 6, Appli
Sequence 7, Appli
Sequence 2, Appli
Sequence 3, Appli
Sequence 3, Appli
Sequence 44, Appl
Sequence 64, Appl
Sequence 64, Appl
Sequence 64, Appl
Sequence 15, Appl
Sequence 15, Appl
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Sequence 17, Appl
Sequence 17, Appl
Sequence 11, Appl
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Sequence 13, Appl
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Sequence 17, Appl
Sequence 18, Appl
Sequence 18, Appl
Sequence 19, Appl
Sequence 19, Appl
Sequence 10, Appl
Sequence 11, Appl
Sequence 11, Appl
Sequence 127, Appl
Sequence 11, Appl
Sequence 127, Appl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 6, Application US/0945956
| Sequence 6, Application US/0945956
| GENERAL INFORMATION:
| APPLICANT: Tsien, Roger Y. |
| APPLICANT: Tsien, Roger Y. |
| TITLE OF INVENTION: DETECTION OF TRANSMEMBRANE POT TITLE OF INVENTION: OPTICAL METHODS |
| FILE OF INVENTION: OPTICAL METHODS |
| CURRENT PAPLICATION OF TRANSMEMBRANE POT TITLE OF INVENTION OPTICAL METHODS |
| CURRENT PAPLICATION OF TRANSMEMBRANE POT TITLE OF INVENTION OF TRANSMEMBRANE POT TITLING DATE: 1999-12-13 |
| PRIOR APPLICATION NUMBER: 08/765,860 |
| PRIOR FILLING DATE: 1999-05-08 |
| PRIOR APPLICATION NUMBER: 08/81,977 |
| PRIOR APPLICATION NUMBER: 09/81,977 |
| PRIOR FILLING DATE: 1995-06-07 |
| PRIOR FILLING DATE: 1995-06-07 |
| PRIOR FILLING DATE: 1995-06-06 |
| NUMBER OF SEQ ID NOS: 22 |
| SOFTWARE: PASTSEQ FOR WINDOWS VERSION 4.0 |
| SEQ ID NO 6 |
| LENGTH: 678 |
| Type: DNA |
| ORGANISM: Discosoma sp
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                                                                                                                                                                                                                                                                                                                                                               Similarity
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                                                                                                                                       TTGTCACCACAATTTCAGTATGGAAGCAAGGTATATGTCAAGCACCCTGCCGACATACCA
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ilarity 100.0%;
Conservative 0;
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US-09-226-852-5
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PCT-US95-08543-3
PCT-US95-08512-3
US-08-436-054-1
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Pred. No. 1.5e-224;
; Mismatches 0;
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Result No.

Query Match

Length

BB

Description

Pred. No. score grea and is der

greater than derived

is the number of results predicted by chance to have a ater than or equal to the score of the result being printed, rived by analysis of the total score distribution.

SUMMARIES

Issued Patents NA:*

1: /cgn2_6/ptodata/2/ina/5A_COMB.seq:*
2: /cgn2_6/ptodata/2/ina/5B_COMB.seq:*
3: /cgn2_6/ptodata/2/ina/6A_COMB.seq:*
4: /cgn2_6/ptodata/2/ina/6B_COMB.seq:*
5: /cgn2_6/ptodata/2/ina/Bata/COMB.seq:*
6: /cgn2_6/ptodata/2/ina/PCTUS_COMB.seq:*

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34.4 34.4 33.2 31.2

US-09-459-956-6
US-09-459-956-7
US-09-459-956-2
US-09-459-956-2
US-09-459-956-3
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US-09-629-1618-15
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US-09-778-156-4
US-09-385-982-257
US-08-464-637-1

678 409.6 271.1 178.4 1147.2 1147.2 1133.2 1132.2 1133.2 1

Minimum Maximum

DB DB

seq

length:

0 2000000000

Post-processing:

Minimum Match 0% Maximum Match 100% Listing first 45 su

summaries

Total number of hits satisfying chosen parameters:

682709 seqs, 277475446 residues

Scoring table:

IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Title: Perfect score:

US-10-006-922A-11 678 1 atgaggtcttccaag

atgaggtcttccaagaatgt.....gccaccatctgttcctttaa

OM nucleic -

nucleic search, using sw

model

Copyright

GenCore version 5.1.6 (c) 1993 - 2004 Compugen

July 11, 2004, 09:50:20 ; Search time 66 Seconds (without alignments) 5700.859 Million cell updates/sec

Database

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FILE REFERENCE: REGEN1290-4

CURRENT APPLICATION NUMBER: US/09/459,956

CURRENT FILING DATE: 1999-12-13

PRIOR APPLICATION NUMBER: 08/765,860

PRIOR FILING DATE: 1999-05-08

PRIOR FILING DATE: 1999-05-08

PRIOR APPLICATION NUMBER: 08/481,977

PRIOR FILING DATE: 1995-06-07

PRIOR APPLICATION NUMBER: PCT/US96/09652

PRIOR APPLICATION NUMBER: PCT/US96/09652

PRIOR FILING DATE: 1996-06-06

NUMBER OF SEQ ID NOS: 22

SOFTWARE: FastSEQ for Windows Version 4.0

SEQ ID NO 5

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; Sequence 5, Application US/09459956
; Patent No. 6342379
; Patent No. 6342379
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Best Local :
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APPLICANT: Gonzalez, III, Jesus E.

TITLE OF INVENTION: DETECTION OF TRANSMEMERANE POTENTIALS
TITLE OF INVENTION: OPTICAL METHODS
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                                                                                                                                            ATGAGGTCTTCCAAGAATGTTATCAAGGAGTTCATGAGGTTTAAGGTTCGCATGGAAGGA 60
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                                                                                                                                                                                              Conservative
                                                                                                                                                                                                        60.4%;
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                                                                                                                                                                                             Score 409.6; DB 4;
Pred. No. 1.4e-131;
0; Mismatches 159;
                                                                                                                                                                                                                                                                                                               Version 4.0
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US-09-459-956-7
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CURRENT APPLICATION NUMBER: US/09/459,956
CURRENT FILING DATE: 1999-12-13
PRIOR APPLICATION NUMBER: 08/765,860
PRIOR FILING DATE: 1999-05-08
PRIOR FILING DATE: 1999-05-08
PRIOR APPLICATION NUMBER: 08/481,977
PRIOR APPLICATION NUMBER: DCT/US96/09652
PRIOR APPLICATION NUMBER: PCT/US96/09652
PRIOR FILING DATE: 1996-06-06
NUMBER OF SEQ ID NOS: 22
SOFTWARE: FASTSEQ for Windows Version 4.0
SEQ ID NO 7
                                                                                                                                                                                                                                                        ; LENGTH: 801
; TYPE: DNA
; ORGANISM: Clavularia
US-09-459-956-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 7, Application Patent No. 6342379 GENERAL INFORMATION:
                                                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Tsien, Roger Y.
APPLICANT: Gonzalez, III, Jesus E.
TITLE OF INVENTION: DETECTION OF TRANSMEMBRANE
TITLE OF INVENTION: OFFICAL METHODS
                                                                                                           GACTATAAAAAGCTGTCATTTCCTGAAGGATTTAAATGGGAAAGGGTCATGAACTTTGAA
GGCACGAGTTTGAAATAGAAGGCGAAGGAGAGGGGAGGCCATACGAAGGCCACAATACCG
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                                                                                                                                                                   Score 271; DB 4;
Pred. No. 1.5e-83;
0; Mismatches 245
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TITLE OF INVENTION: DETECTION OF TRANSMEMBR
FILL REFERENCE: REGEN1290-4
CURRENT APPLICATION NUMBER: US/09/459,956
CURRENT FILING DATE: 1999-05-08
PRIOR APPLICATION NUMBER: 08/481,977
PRIOR APPLICATION NUMBER: DET/US96/09652
PRIOR FILING DATE: 1995-06-07
PRIOR FILING DATE: 1996-06-06
NUMBER OF SEQ ID NOS: 22
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 2
LENGTH: 690
TYPE: DNA
ORGANISM: Anemonia majano
US-09-459-956-2
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US-09-459-956-2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Tsien, Roy
APPLICANT: Gonzalez,
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                                                      Similarity 56.1
50; Conservative
TGC 787
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Gonzalez, III, Jesus E.
VENTION: DETECTION OF TRANSMEMBRANE
VENTION: OPTICAL METHODS
                                                                       26.3%;
                                                    Score 178.4; DB 4;
Pred. No. 1.6e-51;
0; Mismatches 276;
                                                                                                                                                                                                                                                                                                                                                                                                                                         POTENTIALS
                                                        Indels
                                                                                      Length
                                                      6;
                                                      Gaps
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APPLICANT: GONZALOZ, ROGEY Y.
APPLICANT: GONZALOZ, III, Jesus E.
APPLICANT: GONZALOZ, III, Jesus E.
TITLE OF INVENTION: DETECTION OF TRANSMEMBRANE POTENTIALS BY
TITLE OF INVENTION: OPTICAL METHODS
TOTAL REFERENCE: REGENL290-4
CURRENT APPLICATION NUMBER: US/09/459,956
CURRENT FILING DATE: 1999-12-13
PRIOR APPLICATION NUMBER: 08/765,860
PRIOR FILING DATE: 1999-05-08
PRIOR APPLICATION NUMBER: 08/481,977
PRIOR APPLICATION NUMBER: PCT/US96/09652
PRIOR FILING DATE: 1995-06-07
PRIOR APPLICATION NUMBER: PCT/US96/09652
PRIOR FILING DATE: 1996-06-06
NUMBER: OF SEQ ID NOS: 22
SOFTWARE: FASTSEQ for Windows Version 4.0
SEQ ID NO 4
LENGTH: 696
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US-09-459-956-4
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                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 4, Application US/09459956
Patent No. 6342379
GENERAL INFORMATION:
APPLICANT: Tsien, Roger Y.
APPLICANT: Gonzalez, III, Jesus E
Query Match
Best Local Similarity
Matches 316; Conserv
                                                                                        TYPE: DNA ORGANISM: Zoanthus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             543
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGGCTGGGAAGCCAGCACTGAGCGTTTTGTATCCTCGTGATGGCGTGTTGAAAGGAAGAGAT 482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATCCACGTTTCATGGAGTGAACTTTCCTGCTGATGGACCTGTGATGGCGAAGAAGACAAC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATCTACAGTGTTCAAATATGGAAATCGATGCTTTACTGCGTATCCTACCAGTATGCCCGA
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                                                                                              ďŝ
                 21.7%;
   0,
                     Score 147.2; DB 4;
Pred. No. 1.1e-40;
   Mismatches 228;
                                       Length
   Indels
                                         696;
   12;
Gaps
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APPLICANT: Tsien, Roger Y.

APPLICANT: Gonzalez, III, Jesus E.

APPLICANT: Gonzalez, III, Jesus E.

APPLICATIC: Gonzalez, III, Jesus E.

TITLE OF INVENTION: DETECTION OF TRANSMEMBRANE POTENTIALS BY

TITLE OF INVENTION: OPTICAL METHODS

FILE REFERENCE: REGEN1290-4

CURRENT APPLICATION NUMBER: US/09/459,956

CURRENT FILING DATE: 1999-12-13

PRIOR APPLICATION NUMBER: 08/765,860

PRIOR FILING DATE: 1999-05-08

PRIOR FILING DATE: 1995-06-07

PRIOR FILING DATE: 1995-06-07

PRIOR APPLICATION NUMBER: 08/481,977

PRIOR FILING DATE: 1995-06-06
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US-09-459-956-3
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                                                                                                                          ; SOFTWARE: FastSEQ fo
; SEQ ID NO 3
; LENGTH: 696
; TYPE: DNA
; ORGANISM: Zoanthus 8
US-09-459-956-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 3, Applic
Patent No. 6342379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
                                                                       Query Match
Best Local Similarity
                                                         Matches
                                                                                                                                                                                                                              NUMBER OF SEQ ID NOS:
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AGTTTACAAAGCAAAG 564
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Application US/09459956
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                                                                                                                                                                                                                for Windows Version 4.0
                                                                                                                                            ф
                                                                       19.7%;
                                                         ..
                                                     Score 133.4; DB 4;
Pred. No. 6.3e-36;
0; Mismatches 236;
                                                       Indels 12;
                                                                                        Length
                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          476
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Sequence 15, Application US/09609161B

; Sequence 15, Application US/09609161B

; Patent No. 643682

; GENERAL INFORMATION:
    APPLICANT: Bryan, Bruce
    APPLICANT: Szent-Gyorgyi, Christopher
    APPLICANT: Szent-Gyorgyi, Christopher
    APPLICANT: PROLUME, LTD.

; TITLE OF INVENTION: LUCIFERASES, FLUORESCENT PROTEINS, NUCLEIC ACIDS ENCODING THE LUCIFITLE OF INVENTION: AND FLUORESCENT PROTEINS AND THE USE THEREOF IN DIAGNOSTICS, HIGH
    TITLE OF INVENTION: AND FLUORESCENT PROTEINS AND THE USE THEREOF IN DIAGNOSTICS, HIGH
    TITLE OF INVENTION: AND FLUORESCENT PROTEINS AND THE USE THEREOF IN DIAGNOSTICS, HIGH
    TITLE OF INVENTION: AND FLUORESCENT PROTEINS
    FILE REFERENCE: 24729-121B
    CURRENT FILING DATE: 12000-06-30
    PRIOR APPLICATION NUMBER: 00/277,716
    PRIOR APPLICATION NUMBER: 60/102,939
    PRIOR APPLICATION NUMBER: 60/102,939
    PRIOR APPLICATION NUMBER: 60/089,367
    PRIOR APPLICATION NUMBER: 60/089,3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 7
US-09-609-161B-15
                                                                                                                                                                                                                                                                                                        SEQ ID NO 15
                                                                                                                                                                                                                   LENGTH: 10
OTHER INFORMATION: Renilla mulleri Green Fluorescent Protein
                                                                                FEATURE:
NAME/KEY: CDS
                                                                                                                                                                      ORGANISM: Renilla mulleri
                                            LOCATION: (259)..(975)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               490
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                                                                                                                                                        FILE REFERENCE: A-66900-3/RMS
CURRENT APPLICATION NUMBER: US/09/626,
CURRENT FILING DATE: 2000-07-27
PRIOR APPLICATION NUMBER: 09/169,015
PRIOR APPLICATION NUMBER: 09/415,765
PRIOR APPLICATION NUMBER: 09/415,765
PRIOR APPLICATION NUMBER: 09/415,765
PRIOR FILING DATE: 1999-10-08
                                                                                                                                                                                                                                                                                                                                       Sequence 64, Application Patent No. 6548249 GENERAL INFORMATION:
                                                                                                   NUMBER OF SEQ ID NOS: 65
SOFTWARE: PatentIn Ver. 3
SEQ ID NO 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
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TITLE OF INVENTION: Fusions of Scaffold Proteins with Random
TITLE OF INVENTION: Libraries
                                               LENGTH: 1079
TYPE: DNA
ORGANISM: Renilla
NAME/KEY: CDS
LOCATION: (259)..(975)
                                   FEATURE:
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Pred. No. 9.7e-36;
0; Mismatches 313;
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CURRENT APPLICATION NUMBER: US/09/415,765B
CURRENT FILING DATE: 1999;10-08
PRIOR APPLICATION NUMBER: 09/169,015
PRIOR FILING DATE: 1998-10-08
NUMBER OF SEQ ID NOS: 65
SOFTWARE: Patentin Ver: 2.0
SEQ ID NO 64

Random

Peptide

LENGTH: 1079
TYPE: DNA
ORGANISM: Renilla muelleri

FEATURE: NAME/KEY: CDS

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Best Local Similarity 50:0
Sequence 64, Application US/09415765B
Patent No. 6548632
GENERRAL INFORMATION:
APPLICANT: Anderson, David
TITLE OF INVENTION: Fusions of Scaffold Proteins
TITLE OF INVENTION: Libraries
FILE REFERENCE: A66900-1/RMS/AMS
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Pred. No. 9.7e-36;
0; Mismatches 313;
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GENERAL INFORMATION:

APPLICANT: Anderson, David

APPLICANT: Bogenberger, Jakob M.

APPLICANT: Bogenberger, Jakob M.

APPLICANT: Bogenberger, Jakob M.

FILE OF INVENTION: FUSIONS OF SCAFFOLD PROTEINS WIT

FILE REFERENCE: A-66900-2/RMS/AMS

CURRENT APPLICATION NUMBER: US/09/626,580C

CURRENT APPLICATION NUMBER: US 09/15,765

PRIOR APPLICATION NUMBER: US 09/415,765

PRIOR APPLICATION NUMBER: US 09/169,015

PRIOR FILING DATE: 1998-10-08

MUMBER OF SEQ ID NOS: 65

CONTMANDE: DATE: 1998-10-08
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; OTHER INFORMATION: US-09-415-765B-64
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US-09-626-580C-64
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 SOFTWARE: PatentIn version 3.1
SEQ ID NO 64
LENGTH: 1079
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Best Local Similarity 50.6%;
Matches 321; Conservative
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Pred. No. 9.7e-36;
0; Mismatches 313;
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; ORGANISM: Renilla muelleri
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (259)...(975)
; OTHER INFORMATION:
US-09-626-580C-64
Sequence 15, Application US/09277716A

Patent No. 6232107

GENERAL INFORMATION:
APPLICANT: Bryan, Bruce
APPLICANT: Szent-Gyorgyi, Christopher
APPLICANT: PROLUME, LID:
TITLE OF INVENTION: LUCIFERASES, FLUORESCENT PROTEINS, NUCLERENT APPLICATION NUMBER: US/09/277,716A

CURRENT FILING DATE: 1999-03-26

EARLIER APPLICATION NUMBER: 60/102,939

EARLIER APPLICATION NUMBER: 60/089,367

EARLIER APPLICATION NUMBER: 60/089,367

EARLIER FILING DATE: 1998-06-15

EARLIER PILING DATE: 1998-06-15

EARLIER APPLICATION NUMBER: 60/079,624
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US-09-277-716-15
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Pred. No. 9.7e-36;
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Matches
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NUMBER OF SEQ ID NOS: 32
SOFTWARE: PATENTIN VEY: 2.0
SEQ ID NO 15
                                                                               Sequence 30, Application Patent No. 6232107 GENERAL INFORMATION:
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TYPE: DNA
ORGANISM: Renilla mulle
FEATURE:
NAME/KEY: CDS
LOCATION: (259)..(975)
APPLICANT: Bryan, Bruce
APPLICANT: Szent-Gyorgyi, Christopher
APPLICANT: PROLUME, LTD.
TITLE OF INVENTION: LUCITERASES, FLUORESCENT PROTEINS, NUCLEIC
CURRENT APPLICATION NUMBER: US/09/277,716A
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Pred. No. 9.7e-36;
0; Mismatches 313;
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RESULT 13 US-09-609-161B-30 ; Sequence 30, Appl ; Patent No. 643668

Sequence 30, Application Patent No. 6436682

US/09609161B

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CURRENT FILING DATE: 1999-03-26

EARLIER APPLICATION NUMBER: 60/102,939

EARLIER FILING DATE: 1998-10-01

EARLIER APPLICATION NUMBER: 60/089,367

EARLIER FILING DATE: 1998-06-15

EARLIER FILING DATE: 1998-03-27

EARLIER FILING DATE: 1998-03-27

NUMBER OF SEQ ID NOS: 32 |

SOFTWARE: Patentin Ver: 2.0

SEQ ID NO 30
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LOCATION: (34)..(747)
FEATURE:
COTHER INFORMATION: Ptilosarcus
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Best Local (
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GTGGAAGAAGGAAGCTTCGTGGAACAACACGAGACGGCCATTGCAC
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PRIOR FILING DATE: 1999-03-26
PRIOR PELING DATE: 1999-03-26
PRIOR APPLICATION NUMBER: 60/102,939
PRIOR FILING DATE: 1998-10-01
PRIOR APPLICATION NUMBER: 60/089,367
PRIOR PILING DATE: 1998-06-15
PRIOR APPLICATION NUMBER: 60/079,624
PRIOR FILING DATE: 1998-03-27
NUMBER OF SEQ ID NOS: 32
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APPLICANT: Bryan, Bruce
APPLICANT: Szent-Gyorgy
APPLICANT: PROLUME, LTI
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APPLICANT: PROLUME, LTD.
TITLE OF INVENTION: LUCIFERASES, FLUORESCENT PROTEINS,
TITLE OF INVENTION: AND FLUORESCENT PROTEINS AND THE ITITLE OF INVENTION: SCREENING AND NOVELTY ITEMS
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EQ ID NO 30
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LOCATION: (34)..(747)
OTHER INFORMATION: Pt
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ORGANISM: Ptilosarcus
FEATURE:
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GGTGGAGTGAAAGAATTCCCGGAATATCACTTTATCCATCATCGTCTGGAGAAAACCTAC
                                   AAGCCTGTGCAGCTACCAGGGTACTACTATGTTGACTCCAAACTGGATATAACAAGCCAC
                                                                         TACAAACTCGAGTCAGGGAACTATTACTCGTGCCACATGAAAACGTTTTACAGATCCAAA
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Pred. No. 1.9e-35;
0; Mismatches 321;
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APPLICANT: Bryan, Bruce
APPLICANT: Szent-Gyorgyi, Christopher
APPLICANT: PROLUME, LTD.
APPLICANT: PROLUME, LTD.
TITLE OF INVENTION: LUCIFERASES, FLUORESCENT PROTEINS, NUCLIFIER OF INVENTION: LUCIFERASES, FLUORESCENT PROTEINS, NUCLIFIER OF ILLE APPLICATION NUMBER: 00/102,939
EARLIER APPLICATION NUMBER: 60/102,939
EARLIER FILING DATE: 1998-10-01
EARLIER APPLICATION NUMBER: 60/089,367
FEARLIER APPLICATION NUMBER: 60/079,624
EARLIER APPLICATION NUMBER: 60/079,624
EARLIER FILING DATE: 1998-03-27
NUMBER: 05/079,624
EARLIER FILING DATE: 1998-03-27
NUMBER: 05/079,624
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US-09-277-716-31
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LENGTH: 1279
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Best Local Similarity
Matches 325; Conserv
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Patent No. 62321
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NAME/KEY: CDS
LOCATION: (7)..(720)
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                                         CCATCGTTTGAGGTGGTCTACATGAACAGCGGCGTTCTGGTGGGCGAAGTAGATCTCGTT
                                                                                                             AGAGGCAACGGTTTCCCTAGTAACGGACCCGTGATGCAAAAAAGCCATCCTCGGCATGGAG
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Pred. No. 2e-35;
0; Mismatches 321;
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APPLICANT: SZENI-Gyorgyi, Christopher
APPLICANT: PROLUME, LTD.
TITLE OF INVENTION: LUCIFERASES, FLUORESCENT PROTEINS, NUCLEIC ACIDS ENCODING THE LUC
TITLE OF INVENTION: AND FLUORESCENT PROTEINS AND THE USE THERSOF IN DIAGNOSTICS, HIG
TITLE OF INVENTION: SCREENING AND NOVELTY ITEMS
FILE REFERENCE: 24729-121B
CURRENT APPLICATION NUMBER: US/09/609,161B
CURRENT FILING DATE: 2000-06-30
PRIOR APPLICATION NUMBER: 09/277,716
PRIOR FILING DATE: 1999-03-26
PRIOR FILING DATE: 1999-03-26
PRIOR APPLICATION NUMBER: 60/102,939
PRIOR APPLICATION NUMBER: 60/102,939
PRIOR APPLICATION NUMBER: 60/089,367
PRIOR APPLICATION NUMBER: 60/089,367
PRIOR PILLING DATE: 1998-06-15
PRIOR PILLING DATE: 1998-06-15
PRIOR FILLING DATE: 1998-06-15
PRIOR FILLING DATE: 1998-03-27
NUMBER OF SEQ ID NOS: 32
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; NAME/KEY: CDS
; LOCATION: (7)..(720)
; OTHER INFORMATION: Ptilosarcus Green Fluorescent Protein (GFP) (insert US-09-609-161B-31
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LENGTH: 1279
TYPE: DNA
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Best Local Similarity 50.3%;
Matches 325; Conservative
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                                 AACGAAGACTATACAATCGTTGAGCAGTATGAAAGAACCGAGGGAC 658
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Search completed: July 11, 2004, 11:16:48
Job time : 68 secs

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OM protein - protein search, using sw model
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July 8, 2004, 09:54:11 ; Search time 50 Seconds (without alignments) 1403.632 Million cell updates/sec
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Title: Perfect score: US-10-006-922A-12 1214

1 MRSSKNVIKEFMRFKVRMEG......EDYTIVEQYERTEGRHHLFL 225

Scoring table: BLOSUM62

Searched: 1279676 seqs, 311918243 residues Gapop 10.0 , Gapext 0.5

Total number of hits satisfying chosen parameters: 1279676

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database Published_Applications_AA: * : /cgn2_6/ptodata/2/pubpaa/USO7_PUBCOMB.pep:*
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: /cgn2_6/ptodata/2/pubpaa/USO0_PUBCOMB.pep:*

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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tradition of the	د	Sequence 2, Appli	Sequence 1, Appli	Sequence 13, Appl	Sequence 32, Appl	56,	Sequence 2, Appli	Sequence 1, Appli	Sequence 8, Appli	Sequence 12, Appl	Sequence 4, Appli	Sequence 12, Appl	Sequence 12, Appl	Sequence 12, Appl	Sequence 67, Appl	Description

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ALIGNMENTS

Qy 121 KVKFIGVNFPSDGPVMQKKTMGWEASTERLYPRDGVLKGEIHKALKLKDGGHYLVEFKSI
Db 61 LSPQFQYGSKVYVKHPADIPDYKKLSFPEGFKWERVMNFEDGGVVTVTQDSSLQDGCFIY
QY 61 LSPQFQYGSKVYVKHPADIPDYKKLSFPEGFKWERPWNFEDGGVVTVTQDSSLQDGCFTY
Db 1 MRSSKNVIKEFMRFKYRMEGTVNGHEFEIEGEGEGRPYEGHNTVKLKVTKGGPLPFAMDI
Qy 1 MRSSKNVIKEFMRFKVRMEGTVNGHEFEIEGEGEGRPYEGHNTVKLKVTKGGPLPFAMDI
Query Match 100 0%; Score 1214; DB 9; Length 225; Best Local Similarity 100.0%; Pred. No. 1.6e-120; Matches 225; Conservative: 0; Mismatches 0; Indels 0; Gaps
; TYPE: PRT ; ORGANISM: Discosoma sp. US-09-999-745-67
; SEQ ID NO 67 ; LENGTH: 225
; PRIOR FILING DATE: 1999-05-21 ; NUMBER OF SEQ ID NOS: 67
PPLICATION NUME
CURRENT FILING DATE: 2001+10-23
NVENTION:
Baird,
; APPLICANT: Ind KEUENIS OF IND UNIVERSITY OF CHUTEURNIA
ORMATION:
; Patent No. US20020157120A1
Semience 67. Application US/0999745
NSSULT 1

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APPLICANT: REGENTS OF THE UNIVERSITY OF CALIFORNIA
APPLICANT: TSIEN, ROGER
APPLICANT: TSIEN, ROGER
TITLE OF INVENTION: NON-OLIGOMERIZING FLUORESCENT PRO
FILE REFERENCE: REGEN1530-2
CURRENT APPLICATION UNUMBER: US/09/866,538
CURRENT FILING DATE: 2001-05-24
NUMBER OF SEQ ID NOS: 29
SOFTWARE: Patentin version 3.0
SEQ ID NO 12
LENGTH: 225
TYPE: PRT
ORGANISM: Discosoma sp.
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US-09-794-308-12
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SOFTWARE: Patentin ve
; SEQ ID NO 12
; LENGTH: 225
; TYPE: PRT
; ORGANIEM: Discosoma sp
US-09-794-308-12
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                                                      Query Match
Best Local Similarity
Matches 225; Conserv
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Best Local (
                                                                                                                                                                                                                                                                                                APPLICANT: REGENTS OF THE UNIVERSITY OF CALIFORNIA APPLICANT: TSIEN, ROGER APPLICANT: ZACHARIAS, David APPLICANT: BAIRD, Geoffrey TITLE OF INVENTION: NON-OLIGOMERIZING FLUORESCENT
                                                                                                                                                                                                                                                  CURRENT APPLICATION NUMBER: US/09/794,308 CURRENT FILING DATE: 2001-02-26
                                                                                                                                                                                                                                                                                     FILE REFERENCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121 KVKFIGVNFPSDGPVMQKKTMGWEASTERLYPRDGVLKGEIHKALKLKDGGHYLVEFKSI 180
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                                                      100.0%; Score 1214; DB 10; ilarity 100.0%; Pred. No. 1.6e-120; Conservative 0; Mismatches 0;
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US-09-865-291-12
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CURRENT APPLICATION NUMBER: US/09/865,291
CURRENT FILING DATE: 2001-05-24
NUMBER OF SEQ ID NOS: 42
SOPTWARE: Patentin version 3.0
SEQ ID NO 12
                                                                                                                                                             GENERAL INFORMATION:
APPLICANT: Bradbury, Andrew
APPLICANT: Zeytun, Ahmet
                                                                                                                                                                                                              Sequence 4, Application US/10132067
Publication No. US20030203355A1
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Publication No. US20030186229A1
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Best Local S
       NUMBER OF SOFTWARE:
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TYPE: PRT
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                     SEQ ID NOS: 48
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GENERAL INFORMATION:

APPLICANT: REGENTS OF THE UNIVERSITY OF CALIFORNIA
APPLICANT: TSIEN, Roger
APPLICANT: TING, Alice
APPLICANT: TING, Alice
APPLICANT: ZHANG, Jin
TITLE OF INVENTION: EMISSION RATIOMETRIC INDICATORS OF PHOSPHORYLATION
APPLICANT: Zeytun, Ahmet
APPLICANT: Waldo, Geoffrey
APPLICANT: The Regents of the University of California
TITLE OF INVENTION: Fluorobodies: Binding Ligands With
TITLE OF INVENTION: Fluorescence
FILE REFERENCE: 021362-000600US
CURRENT APPLICATION NUMBER: US/10/132,067
CURRENT FILING DATE: 2002-04-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121 KVKFIGVNFPSDGPVMQKKTMGWEASTERLYPRDGVLKGEIHKALKLKDGGHYLVEFKSI 180
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TYPE: PRT

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                                                                                                                                                                                                                  ; ORGANISM: Discosoma species US-10-006-922-12
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SOFTWARE: FastSEQ for Windows Version
SEQ ID NO 12
                                                                                                                             Query Match
Best Local Similarity
Matches 225; Conserv
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Publication No.
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Best Local
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APPLICANT: Fradkov, Arcady
APPLICANT: Labas, Yulii A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION: No. US20020197676A1el Chromophores/Fluorophores and TITLE OF INVENTION: Methods for Using the Same
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                                                                                                                                                                                                                                                        LENGTH: 225
TYPE: PRT
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                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 09/457,556 FILING DATE: 1999-12-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 09/458,477 FILING DATE: 1999-12-09
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61 LSPQFQYGSKVYVKHPADIPDYKKLSFPEGFKWERVMNFEDGGVVTVTQDSSLQDGCFIY 120
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Similarity 100.0%;
                                          MRSSKNVIKEFMRFKVRMEGTVNGHEFEIEGEGEGRPYEGHNTVKLKVTKGGPLPFAWDI
                                                                   MRSSKNVIKEFMRFKVRMEGTVNGHEFEIEGEGEGRPYEGHNTVKLKVTKGGPLPFAWDI
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Matz, Mikhail V.
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No. US20020197676A1
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                                                                                                                        100.0%; Score 1214; DB 13; 100.0%; Pred. No. 1.6e-120; tive 0; Mismatches 0;
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Pred. No. 1.6e-120;
Mismatches 0;
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Sequence 1, Application US/10121258
Publication No. US2003059835A1
GENERAL INFORMATION:
APPLICANT: Tsien, Roger
APPLICANT: Campbell, Robert
TITLE OF INVENTION: MONOMERIC AND DIMERIC FLI
TITLE OF INVENTION: PROTEIN VARIANTS AND ME
FILE REFERENCE: UC083.1CP2CP1
CURRENT APPLICATION NUMBER: US/10/121,258
CURRENT APPLICATION NUMBER: 09/794,308
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Best Local Similarity
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APPLICANT: Yanushevich, Yuriy
APPLICANT: Savistky, Alexandr
APPLICANT: Savistky, Alexandr
APPLICANT: Fradkov, Arcady
TITLE OF INVENTION: No. US20030022287A1 Aggregating Fluorescent Proteins and
TITLE OF INVENTION: Methods for Using the Same
FILE REFERENCE: CLON-067
CURRENT APPLICATION NUMBER: US/10/081,864
CURRENT FILING DATE: 2002-06-19
PRIOR APPLICATION NUMBER: 10/066,922
PRIOR FILING DATE: 2001-02-21
PRIOR FILING DATE: 2001-02-21
PRIOR APPLICATION NUMBER: 60/270,983
PRIOR FILING DATE: 2001-02-21
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ORGANISM: Discosoma
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Pred. No. 1.
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METHODS FOR
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; TYPE: PRT
; ORGANISM: Discosoma sp.
US-10-315-920-2
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US-10-315-920-2
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                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: FastSEQ for Windows Version SEQ ID NO 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE: FastSEQ for Windows Version SEQ ID NO 1
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                                                                                                                                                                                                                    Query Match
Best Local Similarity
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TYPE: PRT
ORGANISM: Discosoma s
FEATURE:
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PRIOR FILING DATE: 2000-66-14
PRIOR APPLICATION NUMBER: PCT/US01/19097
PRIOR FILING DATE: 2001-06-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION NUMBER: US/10/315,920
CURRENT FILING DATE: 2002-12-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Terbkikh, Alexey
TITLE OF INVENTION: FLUORESCENT TIMER PROTEINS AND METHODS
TITLE OF INVENTION: FOR THEIR USE
FILE REFERENCE: CLON-077CIP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Fradkov, Arcady Fedorovich APPLICANT: Terskikh, Alexey
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PRIOR APPLICATION NUMBER: 09//
PRIOR ETILING DATE: 2001-05-24
NUMBER OF SEQ ID NOS: 78
                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQ ID NOS: 22
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LOCATION: (1)...(225)
OTHER INFORMATION: wild-type DsRed
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                                                                                                                                             MRSSKNVIKEFMRFKVRMEGTVNGHEFEIEGEGEGRPYEGHNTVKLKVTKGGPLPFAMDI 60
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                                        LSPOFQYGSKVYVKHPADIPDYKKLSFPEGFKWERVMNFEDGGVVTVTQDSSLQDGCFIY
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                                                                                                                                                                                              100.0%; Score 1214; DB 14; ilarity 100.0%; Pred. No. 1.6e-120; Conservative 0; Mismatches 0;
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Pred. No. 1.6e-120;
Mismatches 0;
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APPLICANT: DAHL, Soren Weis et al.

TITLE OF INVENTION: FILDROPHORE COMPLEMENTATION PRODUCTS

FILE REFERENCE: 3759-0130P

CURRENT APPLICATION NUMBER: US/10/370,570

CURRENT FILING DATE: 2003-02-24

NUMBER OF SEQ ID NOS: 71

SOFTWARE: PatentIn version 3.2

SEQ ID NO 56

LENGTH: 225

TYPE: PAT

ORGANISM: Discosoma sp.

US-10-370-570-56
                                                                                                             APPLICANT: Wan, David Chi-Cheong
APPLICANT: Tp, Denis Tex-Ming
APPLICANT: Tp, Denis Tex-Ming
APPLICANT: The Chinese University of Hong Kong
TITLE OF INVENTION: NO. US20030219814A1el Fluorescent Pro
FILE REFERENCE: 0.16285-34-1
CURRENT APPLICATION NUMBER: US/10/406,618
CURRENT FILING DATE: 2003-04-02
PRIOR APPLICATION NUMBER: US 60/387,968
PRIOR FILING DATE: 2002-06-11
PRIOR FILING DATE: 2002-06-11
PRIOR FILING DATE: 2002-04-05
NUMBER OF SEQ ID NOS: 32
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 32
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US-10-370-570-56
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                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
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Publication No. US20030219814A1
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OTHER INFORMATION: Description of Artificial Sequence: OTHER INFORMATION: fluororescent protein DsRed.
                                                         TYPE: PRT
ORGANISM: Artificial Sequence
                                         FEATURE:
                                                                                                   LENGTH:
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US-10-433-640-13
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Best Local Sim
Matches 225;
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Best Local Sim.
Matches 225;
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FILE REFERENCE: 1487/3
CURRENT APPLICATION NUMBER: US/10/433,640
CURRENT FILING DATE: 2003-10-02
PRIOR APPLICATION NUMBER: PCT/EP01/14610
PRIOR APPLICATION NUMBER: DCT/EP01/14610
PRIOR FILING DATE: 2000-12-12
NUMBER OF SEQ ID NOS: 24
SOPTWARE: PATENTIN VETSION 3.2
SEQ ID NO 13
Sequence 1, Application US/10343977
Publication No. US20040014134A1
GENERAL INFORMATION:
APPLICANT: Kuhlemann, Rene
APPLICANT: Koltermann, Andre
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Publication No. US20040115792A1
GENERAL INFORMATION:
APPLICANT: Lichtenberg-Frate, Hella
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TYPE: PRT
ORGANISM: Discosoma
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Local Similarity 100.0%;
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Pred. No. 1.6e-120;
Mismatches 0;
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APPLICANT: Kettling, Ulrich
APPLICANT: Schwille, Petra
TITLE OF INVENTION: Dual coloured fluorimetric protease assay
FILE REFERENCE: 023425us/JH/ml
CURRENT APPLICATION NUMBER: US/10/343,977
CURRENT FILING DATE: 2003-02-06
PRIOR APPLICATION NUMBER: PCT/EP01/09112
PRIOR FILING DATE: 2001-08-07
NUMBER OF SEQ ID NOS: 12
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 2
LENGTH: 506
TYPE: PRT
ORGANISM: Artificial sequence
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US-10-343-977-2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 2, Application US/10343977
Publication No. US20040014134A1
GENERAL INFORMATION:
APPLICANT: Kuhlemann, Rene
APPLICANT: Koltermann, Andre
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                                                       Matches 225;
                                                                                             Query Match
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Best Local Similarity
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APPLICANT: Schwille, Petra
TITLE OF INVENTION: Dual coloured fluorimetric protease
FILE REFERENCE: 02342sus/JH/ml
CURRENT APPLICATION NUMBER: US/10/343,977
CURRENT FILING DATE: 2003-02-06
PRIOR APPLICATION NUMBER: PCT/EP01/09112
PRIOR APPLICATION NUMBER: PCT/EP01/09112
PRIOR FILING DATE: 2001-08-07
NUMBER OF SEQ ID NOS: 12
SOFTWARE: Patentin Ver. 2.1
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TYPE: PRT
ORGANISM: Artificial sequence
FEATURE:
                                                                                                                                                      OTHER INFORMATION: Autofluorescent fusion protein derived from OTHER INFORMATION: e.g. Aequorea victoria and/or Discoma sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OTHER INFORMATION: Autofluorescent fusion protein derived from GFP variants of OTHER INFORMATION: e.g. Aequorea victoria and/or Discoma sp.
                                                                                                                                                                                              FEATURE:
                                                                            Local Similarity
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1 MRSSKNVIKEFMRFKVRMEGTVNGHEFEIEGEGEGRPYEGHNTVKLKVTKGGPLPFAWDI
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Pred. No. 4.9e-120;
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                                                                   Score 1214; DB 15;
Pred. No. 5.2e-120;
                                                       Mismatches
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Sequence 3, Application US/10343977

| Sequence 3, Application No. US20040014134A1
| GENERAL INFORMATION:
| APPLICANT: Kuhlemann, Rene
| APPLICANT: Kuhlemann, Andre
| APPLICANT: Kottermann, Andre
| APPLICANT: Kettling, Ulrich
| APPLICANT: Schwille, Petra
| TITLE OF INVENTION: Dual coloured fluorimetric protease assay
| TITLE REFERENCE: 023425us/J/ml
| CURRENT APPLICATION NUMBER: US/10/343,977
| CURRENT FILING DATE: 2001-02-06
| PRIOR APPLICATION NUMBER: PCT/EP01/09112
| PRIOR FILING DATE: 2001-08-07
| NUMBER OF SEQ ID NOS: 12
| SOFTWARE: Patentin Ver. 2.1
| SEQ ID NO 3
| LENGTH: 547
| TYPE: PRT | CRGANISM: Artificial sequence | FEATURE: OTHER INFORMATION: Autofluorescent fusion protein derived from GFP variants of OTHER INFORMATION: e.g. Aequorea victoria and/or Discoma sp.
Search completed: July 8, Job time : 51 secs
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181 YMAKKPVQLPGYYYVDSKLDITSHNEDYTIVEQYERTEGRHHLFL 225
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                                                                                  YMAKKPVQLPGYYYVDSKLDITSHNEDYTIVEQYERTEGRHHLFL 547
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Perfect score:
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Maximum Match 100%
Listing first 45 summaries
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                                                                                                                                                                                                                                                                                                                                                                                                                                 /cgn2_6/ptodata/1/pubpna/US08_NEW_PUB.seq:*
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10457.256 Million cell updates/sec
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3 US-10-132-067-3

US-10-1006-922-11

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10 US-10-335-517-6

10 US-10-335-517-6

10 US-09-999-745-66

10 US-09-866-538-11

10 US-09-866-538-11

10 US-09-865-291-11

17 US-10-433-640-12

10 US-09-797-4958-3

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17 US-10-314-936-1
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             Sequence 6, Appli
Sequence 1, Appli
Sequence 11, Appli
Sequence 2, Appli
Sequence 6, Appli
Sequence 6, Appli
Sequence 66, Appli
Sequence 11, Appl
Sequence 11, Appl
Sequence 11, Appl
Sequence 12, Appl
Sequence 12, Appl
Sequence 22, Appli
Sequence 22, Appl
Sequence 22, Appli
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ALIGNMENTS

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5	o G	Sequence 5, Appli	7	'n	е9,	e 13,	e 38,	7,	Sequence 14, Appl	e 36,	e 5,	e 37,	e u	e 75,	e 51	Sequence 3, Appli	e 45	e 16	e 29	e 23	e 3, 1	μ,	7,	,	Sequence 1, Appli	39,	e 17,	e 40,	45	Sequence 3, Appli

NUMBER OF SEQ ID NOS: 22 | SOFTWARE: PatentIn version 3 SEQ ID NO 6 LENGTH: 678 TYPE: DNA ORGANISM: Discosoma sp "red' US-09-967-772-6 CURRENT APPLICATION NUMBER: US/09/967,772 CURRENT FILING DATE: 2001-09-28 PRIOR APPLICATION NUMBER: US 09/459,956 PRIOR FILING DATE: 1999-12-13 PRIOR APPLICATION NUMBER: US 08/765,860 PRIOR FILING DATE: 1996-12-19 PRIOR APPLICATION NUMBER: US 08/609652 PRIOR FILING DATE: 1996-06-07 PRIOR FILING DATE: 1996-06-07 PRIOR APPLICATION NUMBER: US 08/481,977 PRIOR FILING DATE: 1995-06-07 PRIOR FILING DATE: 1995-06-07 US-09-967-772-6 Sequence 6, Application US/09967772 Patent No. US20020164577A1 GENERRAL INFORMATION: APPLICANT: THE REGENTS OF THE UNIVERSITY OF CALIFORNIA APPLICANT: TSIEN, Roger APPLICANT: GONZALEZ, Jesus TITLE OF INVENTION: DETECTION OF TRANSMEMBRANE POTENTIALS BY OPTICAL METHODS FILE REFERENCE: REGEN1290-15 3.0

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61 ACGGTCAATGGGCACGAGTTTGAAATAGAAGGCGAAGGAGAGGGGGAGGCCATACGAAGGC 120

1 ATGAGGTCTTCCAAGAATGTTATCAAGGAGTTCATGAGGTTTAAGGTTCGCATGGAAGGA ATGAGGTCTTCCAAGAATGTTATCAAGGAGTTCATGAGGTTTAAGGTTCGCATGGAAGGA

Query Match Best Local S Matches 678

Local Similarity 678;

Conservative

100.0%; Score 678; DB 9; 1 100.0%; Pred. No. 1.2e-218; tive 0; Mismatches 0;

Length 678; Indels

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Gaps

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GENERAL INFORMATION:

APPLICANT: Bradbury, Andrew
APPLICANT: Zeytun, Ahmet
APPLICANT: Waldo, Geoffrey
APPLICANT: Waldo, Geoffrey
TITLE OF INVENTION: Fluorobodies: Binding Ligands With Int
TITLE OF INVENTION: Fluorobodies: Binding Ligands With Int
TITLE OF INVENTION: Fluorobodies: Binding Ligands With Int
TITLE OF INVENTION: Pluorescence
FILE REFERENCE: 021362-000600US
CURRENT APPLICATION NUMBER: US/10/132,067
CURRENT FAPLICATION NUMBER: US/10/132,067
CURRENT FAPLICATION OF SEQ ID NOS: 48
SOPTWARE: PatentIn Ver. 2.1
SEQ ID NO 3
SEQ ID NO 3
LENGTH: 678
TYPE: DNA
ORGANISM: Discosoma sp.
                      ; FEATURE:
; OTHER INFORMATION: red flu
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (1)...(678)
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RESULT 3
US-10-006-922-11
(Sequence 11, Application US/10006922
Fublication No. US20020197676A1
(FUBLICANT: Likyanov, Sergey A
APPLICANT: Fradkov, Arcady F.
APPLICANT: Habas, Yulii A.
APPLICANT: Terskikh, Alexey
TITLE OF INVENTION: No. US20020197676A1el Chromophores/Fluorophores and
TITLE OF INVENTION: Methods for Using the Same
FILE REFERENCE: CLON-035CLP
CURRENT APPLICATION NUMBER: US/10/006,922
CURRENT PILING DATE: 2001-12-04
FRIOR APPLICATION NUMBER: 09/120,330
PRIOR APPLICATION NUMBER: 09/120,330
PRIOR FILING DATE: 1998-12-11
PRIOR FILING DATE: 1999-12-09
PRIOR APPLICATION NUMBER: 09/457,898
PRIOR FILING DATE: 1999-12-09
PRIOR APPLICATION NUMBER: 09/458,144
PRIOR APPLICATION NUMBER: 09/458,144

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; PRIOR APPLICATION NUMBER: 09/458,477
; PRIOR FILLING DATE: 1999-12-09
; PRIOR APPLICATION NUMBER: 09/457,556
; PRIOR APPLICATION NUMBER: 09/444,338
; PRIOR FILLING DATE: 1999-11-19
; NUMBER OF SEQ ID NOS: 46
; SOFTWARE: FASTSEQ for Windows Version 4.
; SEQ ID NO 11
; LENGTH: 678
; TYPE: DNA
; ORGANISM: Discosoma species
US-10-006-922-11
RESULT 4
US-10-121-258-2
; Sequence 2, Application US/10121258
; Publication No. US20030059835A1
; GENERAL INFORMATION:
; APPLICANT: Tsien, Roger
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TITLE OF INVENTION: MONOMERIC AND DIMERIC FLI
TITLE OF INVENTION: MONOMERIC AND DIMERIC FLI
TITLE OF INVENTION: PROTEIN VARIANTS AND ME
FILE REFERENCE: UC083.1CP2CP1
CURRENT FILING DATE: 2002-04-10
PRIOR APPLICATION NUMBER: U9/794,308
PRIOR APPLICATION NUMBER: U9/794,308
PRIOR FILING DATE: 2001-02-26
PRIOR APPLICATION NUMBER: 09/866,538
PRIOR FILING DATE: 2001-05-24
NUMBER OF SEQ ID NOS: 78
SOFTWARE: FRASTSEQ for Windows Version 4.0
SEQ ID NO 2
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NAME/KEY: misc_feature |
LOCATION: (1)...(678)
OTHER INFORMATION: wild-type
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; ORGANISM: Discosoma
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CURRENT APPLICATION NUMBER: US/10/335,517
CURRENT PILING DATE: 2002-12-31
PRIOR APPLICATION NUMBER: US/09/567,772
PRIOR PILING DATE: 2001-09-28
PRIOR PILING DATE: 1999-12-13
PRIOR FILING DATE: 1999-12-13
PRIOR PILING DATE: 1996-12-19
PRIOR PILING DATE: 1996-12-19
PRIOR PILING DATE: 1996-12-19
PRIOR PILING DATE: 1996-12-19
PRIOR APPLICATION NUMBER: ECT/ US96/09652
PRIOR APPLICATION NUMBER: 05/08/481,977
PRIOR PILING DATE: 1995-06-07
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US-10-335-517-6
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Best Local Similarity
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EQ ID NO 6
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; TYPE: DNA; ORGANISM: Discosoma US-10-334-288-6
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CURRENT APPLICATION NUMBER: US/10/334,288
CURRENT FILING DATE: 2002-12-31
PRIOR APPLICATION UNMBER: US/09/967,772
PRIOR FILING DATE: 2001-09-28
PRIOR FILING DATE: 2001-09-28
PRIOR PILING DATE: 1999-12-13
PRIOR FILING DATE: 1999-12-13
PRIOR FILING DATE: 1999-12-13
PRIOR FILING DATE: 1996-12-19
PRIOR FILING DATE: 1996-12-19
PRIOR APPLICATION NUMBER: US 08/765,860
PRIOR APPLICATION UNMBER: US 08/765,9652
PRIOR APPLICATION NUMBER: US 08/481,977
PRIOR APPLICATION NUMBER: US 08/481,977
PRIOR FILING DATE: 1995-06-07
PRIOR FILING DATE: 1995-06-07
PRIOR FILING DATE: 1995-06-07
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APPLICANT: THE REGENTS OF THE UNIVERSITY OF CALIFORNIA
APPLICANT: TSIEN, ROGER
APPLICANT: GONZALEZ, Jesus
TITLE OF INVENTION: DETECTION OF TRANSMEMBRANE POTENTIALS BY OPTICAL METHODS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 6, Application US/10334288
Publication No. US20040002123A1
GENERAL INFORMATION:
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Best Local Similarity
Matches 678; Conserv
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SOFTWARE: PatentIn version 3.0
SEQ ID NO 6
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                                                                                                   GACGGTGGCGTCGTTACTGTAACCCAGGATTCCAGTTTGCAGGATGGCTGTTTCATCTAC
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US-09-999-745-66
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; LOCATION: (54)..(731)
US-09-999-745-66
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APPLICANT: THE REGENTS OF THE UNIVERSITY OF CALIFORNIA

APPLICANT: Tsien, Roger Y.

APPLICANT: Tsien, Roger Y.

APPLICANT: Baird, Geoffrey

TITLE OF INVENTION: CIRCULARLY PERMUTED FLUORESCENT PROTEIN INDICATORS

FILE REFERENCE: REGEN1470-1

CURRENT APPLICATION NUMBER: US/09/999,745

CURRENT FILING DATE: 2001-10-23

PRIOR APPLICATION NUMBER: 09/316,920

PRIOR APPLICATION NUMBER: 09/316,920

PRIOR FILING DATE: 1999-05-21

NUMBER OF SEQ ID NOS: 67

SOPTWARE: Patentin version 3.0

SEQ ID NO 66
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Best Local Similarity
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TYPE: DNA
ORGANISM: Discosoma :
FEATURE:
                     301
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GACGGTGGCGTCGTTACTGTAACCCAGGATTCCAGTTTGCAGGATGGCTGTTTCATCTAC 360
                                                                                                                                         TTGTCACCACAATTTCAGTATGGAAGCAAGGTATATGTCAAGCACCCTGCCGACATACCA 240
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Sequence 11, Application US/09866538

Publication No. US20030032088A1

GENERAL INFORMATION:
APPLICANT: REGENTS OF THE UNIVERSITY OF CALIFORNIA
APPLICANT: TSIEN, ROSET
APPLICANT: Campbell, ROSert
ITILE OF INVENTION: NON-OLIGOMERIZING FLUORESCENT PROTEINS
FILE REFERENCE: REGEN1530-2
CURRENT APPLICATION NUMBER: US/09/866,538
CURRENT FILING DATE: 2001-05-24
NUMBER OF SEQ ID NOS: 29
SOFTWARE: Patentin version 3.0
SEQ ID NO 11
LENGTH: 859
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; LOCATION: (54)..(731)
US-09-866-538-11
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US-09-866-538-11
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Best Local Similarity
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ORGANISM: Discosoma
FEATURE:
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GACTATAAAAAGCTGTCATTTCCTGAAGGATTTAAATGGGAAAGGGTCATGAACTTTGAA
                              GACTATAAAAAGCTGTCATTTCCTGAAGGATTTAAATGGGAAAGGGTCATGAACTTTGAA
                                                                                 TTGTCACCACAATTTCAGTATGGAAGCAAGGTATATGTCAAGCACCCTGCCGACATACCA
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Best Local Simi
Matches 678;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION: NON-OLIGOMERIZING FLUORESCENT PROTEINS FILE REFERENCE: REGEN1530
CURRENT APPLICATION NUMBER: US/09/794,308
CURRENT FILING DATE: 2001-02-26
NUMBER OF SEQ ID NOS: 25
SOFTWARE: Patentin version 3.0
SEQ ID NO 11
LENGTH: 859
TYPE: DNA
ORGANISM: Discosoma sp.
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                           TTGTCACCACAATTTCAGTATGGAAGCAAGGTATATGTCAAGCACCCTGCCGACATACCA
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Pred. No. 1.4e-218;
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APPLICANT: TSIEN, ROGER
APPLICANT: TING, Alice
APPLICANT: ZHANG, Jin
TITLE OF INVENTION: EMISSION RATIOMETRIC INDICATORS OF
FILE REFERENCE: REGENISSO
CURRENT APPLICATION NUMBER: US/09/865,291
CURRENT FILING DATE: 2001-05-24
NUMBER OF SEQ ID NOS: 42
SOFTWARE: PATENTIAL VERSION 3.0
SEQ ID NO 11
LENGTH: 859
TYPE: DNA
ORGANISM: Discosoma sp.
FRATURE:
NAME/KEY: CDS
LOCATION: (54)...(731)
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RESULT 11
US-10-433-640-12
; Sequence 12, Application US/10433640
; Publication No. US20040115792A1
; GENERAL INFORMATION:
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FILE REFERENCE: 1487/3
CURRENT PELLORION NUMBER: US/10/433,640
CURRENT FILING DATE: 2003-10-02
PRIOR APPLICATION NUMBER: PCT-EP01/14610
PRIOR PILING DATE: 2001-12-12
PRIOR APPLICATION NUMBER: DE 10061872.3
PRIOR FILING DATE: 2001-12-12
SEGO ID NO 12
LENGTH: 859
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                                                                                                                                            100.0%; Score 678; DB 17; Length 859; ilarity 100.0%; Pred. No. 1.4e-218; Conservative 0; Mismatches 0; Indels 0
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TITLE OF INVENTION: Chimeric Fluorescent Enzymes and FILE REFERENCE: 600-1-267
CURRENT APPLICATION NUMBER: US/09/797,496B
CURRENT FILING DATE: 2002-05-24
NUMBER OF SEQ ID NOS: 4
SOPTWARE: PatentIn version 3.1
SEQ ID NO 3
LENGTH: 3311
TYPE: DNA
ORGANIEM: Artificial sequence
                                                                                                    ; OTHER INFORMATION: Discosoma ; OTHER INFORMATION: ication. US-09-797-496B-3
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                                                                                                                                                     FEATURE:
                                                  Local Similarity
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                              99.9%;
ilarity 100.0%;
Conservative (
                                                                                                                                      red
                                0; Mismatches
                                               Score 677;
Pred. No.
                                                                                                                                      fluorescent
                                                 6.9e-218;
                                                                   DB 10;
                                                                                                                                    protein
                                  0
                                                                                                                                                                                                                                                                                                                                   and Uses
                                                                 Length 3311;
                                  Indels
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Sequence 22, Application US/10332733

Publication No. US20040106565A1

GENERAL INFORMATION:
APPLICANT: Margarete Odenthal and Diana Jung
ITILE OF INVENTION: Gene Expression, Genome Alteration And Reporter Expression
ITILE OF INVENTION: In Myofibroblasts And Myofibroblast-like Cells
ITILE REFERING: 1472/68806
CURRENT APPLICATION NUMBER: US/10/332,733
CURRENT FILING DATE: 2003-06-10
NUMBER OF SEQ ID NOS: 41
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 22
LENGTH: 666
TYPE: DNA
ORGANISM: Artificial sequence
FEATURE:
S
                                                                                                  ; OTHER INFORMATION: ; OTHER INFORMATION: US-10-332-733-22
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US-10-332-733-22
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     ATAACAAGCCACAACGAAGACTATACAATCGTTGAGCAGTATGAAAGAACCGAGGGACGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TACATGGCAAAGAAGCCTGTGCAGCTACCAGGGTACTACTATGTTGACTCCAAACTGGAT
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                                  98.1%;
(larity 100.0%;
Conservative (
                                                                                                                  Description of artificial sequence: Red Fluorescent Protein
                                  0
                                  Score 665; DB 17; Pred. No. 3.1e-214; 0; Mismatches 0;
                                                                 Length 666
                                  Indels
                                  0
                                  Gaps
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                                                                                                                                               Sequence 1, Application US/10314936
; Publication No. US20040110225A1
; GENERAL INFORMATION:
; APPLICANT: Gibbs, Patrick D.L.
; APPLICANT: Carter, Robert W.
; APPLICANT: Schmale, Michael C.
; APPLICANT: Schmale, Michael C.
; TITLE OF INVENTION: FLUORESCENT PROTEINS FROM AQUATIC SPECIES
; TITLE OF INVENTION NUMBER: US/10/314,936
; CURRENT APPLICATION NUMBER: US/10/314,936
; CURRENT APPLICATION SCHMER: 2002-12-09
; NUMBER OF SEQ ID NOS: 15
; SOFTWARE: Patentin version 3.1
; SEQ ID NO
; LENGTH: 711
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (1)..(711)
; OTHER INFORMATION:
US-10-314-936-1
                                                                                                                                                                                                                                                                                                                                                                                      RESULT 14
US-10-314-936-1
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                                                                                 TYPE: DNA
ORGANISM: Artificial
FEATURE:
OTHER INFORMATION: mutant
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAGCTTAAGGTAACCAAGGGGGGACCTTTGCCATTTGCTTGGGATATTTTTGTCACCACAA
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672 660

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RESULT 15

US-10-314-936-3

Sequence 3, Application US/10314936

Publication No. US2004011025A1

GENERAL INFORMATION:
APPLICANT: Gibbs, Patrick D.L.
APPLICANT: Carter, Robert W.
APPLICANT: Schmale, Michael C.
TITLE OF INVENTION: FLUORESCENT PROTEINS FROM AQU
FILE REFERENCE: 638.004

CURRENT APPLICATION NUMBER: US/10/314,936

CURRENT FILING DATE: 2002-12-09

NUMBER OF SEQ ID NOS: 15

SOFTWARE: Patentin version 3.1

SEQ ID NO 3

LENGTH: 711

TYPE: DNA
ORGANISM: Artificial
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19	449.2	66.3	678	σ	AAD28207	Aad28207 Discosoma
20	449.2	66.3	695	w	AAA48743	Aaa48743 Humanised
21	447.6	66.0	678	σ	ABA95922	Aba95922 Yeast opt
22	447.2	66.0	681	9	ADC24134	Adc24134 Discosoma
23	447.2	66.0	4692	6	AAL47954	Aal47954 Modified

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45	44	43	42	41	40	39	38	37	36	ω 5	34	ω u	32	31	30	29	28	27	26	25	24
404	409.6	409.6	409.6	409.6	410.4	432.2	434.6	435.6	436.2	438	438.2	438.2	439.6	441.2	441.2	445.6	445.8	446	447.2	447.2	447.2
59.6	60.4	60.4	60.4	60.4	60.5	63.7	64.1	64.2	64.3	64.6	64.6	64.6	64.8	65.1	65.1	65.7	65.8	65.8	66.0	66.0	66.0
404	960	699	699	699	681	678	850	675	6985	678	681	681	678	678	678	5436	6893	678	9320	7910	4692
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ADA38081	AAA28862	AAD11141	AAD13052	AAH47653	ADC24130	ADC24128	AAD03614	AAD46281	ACA55359	AAD46282	ABA95907	ABA95906	AAD28209	ABA95920	ABA95905	AAD10003	ADE24111	AAD28208	ABS56664	AAD09979	ACC44640
Ada38081	Aaa28862	Aad11141	Aad13052	Aah47653	Adc24130	Adc24128	Aad03614	Aad46281	Aca55359	Aad46282	Aba95907	Aba95906	Aad28209	Aba95920	Aba95905	Aad10003	Ade24111	Aad28208	Abs56664	Aad09979	ACC44640
DNA of a	D. striat	Discosoma	Discosoma	D. striat	Discosoma	Discosoma	Discosoma	Discosoma	Transform	Discosoma	Yeast opt	Yeast opt	Discosoma	Yeast opt	Yeast opt	Plasmid p	Proviral				

ALIGNMENTS

12	ž	PΑ	×	PR	X	PF	X	PD	×	PN	×	စ္တ	×	₹	×	DH	×	Ŋ	×	AC	×	Ħ	AAH47654	RESULT 1
NCIBOIL D, Gallatta B, 1916II N;		(AURO-) AURORA BIOSCIENCES CORP.		23-FEB-2000; 2000US-0184732P.		13-FEB-2001; 2001WO-US004625.	-	30-AUG-2001.		WO200162919-A1.		Discosoma sp.		Fluorescent protein; Anthozoan; fluorescence; marker; FRET; drFP583;		Discosoma sp. red drFP583 protein coding sequence.		30-NOV-2001 (first entry)		AAH47654;		AAH47654 standard; cDNA; 678 BP.	654	T 1

88.

Proteins for Fluorescence Resonance Energy Transfer (FRET) comprise functional red fluorescent proteins, and the encoding nucleic acids, with key mutations for improving the proteins function.

WPI; 2001-557704/62.

Disclosure; Page 83; 90pp; English.

The invention provides a nucleic acid encoding functional red fluorescent CC protein (II) that differs from the sequence of an Anthozoan red fluorescent protein by at least one amino acid substitution, and with different fluorescent properties. The red fluorescent protein of the invention can be expressed by standard recombinant methodology. (II) are used a fluorescent markers and FRET partners. It is used for identifying protein protein interactions. (II) is also suitable for multiplexed fluorescent analysis and FRET-based applications using existing Aequorea fluorescent proteins. (II) has improved brightness, reduced spectral cross talk, and is rapidly and efficiently expressed in mammalian cells. The key mutations in the encoding nucleic acids provide improved folding, brightness, and create (II) with sharper, more defined excitation and

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Protein destabilisation; linker moiety; reporter moiety; diseas linear multimerised domain; -NH-ubiquitin protein endoprotease; transgenic animal; transgenic plant; disease resistance; anthozoa fluorescent protein; natural fluorescent protein; ss.
                                                                                                                   Discosoma
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04-FEB-2000; 2000US-00498098
                                                                                02-FEB-2001; 2001WO-US003791
                                                                       AURORA BIOSCIENCES CORP
                                                                  Whitney M,
                                                                  Cubitt AB,
                                                                  Pollok BA;
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Destabilizing proteins in living cells, by coupling a target linear multimerized destabilization domain non-cleavable by protein endoproteases, comprising two copies of the domain. -NH-ubiquitin

171pp; English.

protease, protein kinase or phosphoprotein phosphatase activity and is also useful for identifying modulators of these activities. The method also useful for developing movel assays for a wide range of post-translational activities, such as proteolysis, phosphorylation, dephosphorylation, glycosylation, methylation, sulfation, prenylation, disulfide bond formation and ADP-ribosylation within cells. The recombinant DNA molecule of the invention is useful for creating transgenic animals useful as disease models and transgenic plants with improved disease resistance or other favourable traits. The present sequence is Discosoma sp. "red" anthozoa fluorescent protein, dsFP483 CDNA which is a natural fluorescent protein used as a reporter moiety in the exemplification of the invention The present invention relates to a method for destabilising a target protein in a cell. The method comprises a linker moiety which operative couples a target protein (a reporter moiety) to a linear multimerised destabilising domain, which is non-cleavable by a -NH-ubiquitin protein endoproteases. The method is useful for detecting an activity such as operatively ä 18

Sequence 678 BP; 205 A; 129 C; 178 G; 166 Η, 0 U, 0 Other;

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Length

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                                    GACGGTGGCGTCGTTACTGTAACCCAGGATTCCAGTTTGCAGGATGGCTGTTTCATCTAC
                                               GACGGTGGCGTCGTTACTGTAACCCAGGATTCCAGTTTGCAGGATGGCTGTTTCATCTAC
                                                                             GACTATAAAAAGCTGTCATTTCCTGAAGGATTTAAATGGGAAAGGGTCATGAACTTTGAA
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ilarity 100.0%;
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No. 7.3e-208;
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            The patent discloses optical methods and compositions for determining transmembrane potential across biological membranes in living cells. The method of determining the electrical potential across a membrane in a biological system comprises introduction of two reagents, a first reagent comprising a hydrophobic fluorescent ion capable of redistributing from a first face of the membrane to a second face of the membrane in response to membrane potential change and a second reagent that label the first face or the second face of the membrane, which comprises a chromophore capable of undergoing energy transfer by either donating or accepting excited state energy to the fluorescent ion. The membrane is then exposed to excitation light and the energy transfer between the reagents is measured and related to the membrane potential. The method is useful for detecting changes in membrane potential in subcellular organelle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Transmembrane potential; biological membrane; test chemical screening; Anthozoa fluorescent transgenic organism; drFP583 protein; ds.
                                                                                                                                                                                                                                                                      Determining electrical potential across a membrane in biological systems, comprises introducing two reagents, exposing the membrane to light and
                                                                                                                                                                                                                           Disclosure; Page 150; 154pp; English.
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Best Local
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                Yeast optimised RFP related
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fluorescent
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protein;
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RFP; plant; transgenic;
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Matches 678
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sequence ABA95906 encoding a yeast (yRFP). (I) are used to express red
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Disclosure; Page 14; 19pp; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     especially yeast or plants.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New DNA encoding red fluorescent protein, useful as marker in biotechnology, has sequence optimized for expression in eukaryotes,
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/product= "yeast optimised
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Pred. No. 7.3e-208;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Discosoma red fluorescent protein; DsRed; AB interface; AC interface; fluorescent protein variant; transcription induction detection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18-DEC-2003
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24-MAY-2001;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Discosoma wild-type red fluorescent protein DNA
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CAMPBELL R
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2001US-00866538.
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transcriptional activity. Novel polynucleotide sequence encoding Discosoma red fluorescent protein variant having a reduced propensity to oligomerize, useful for detecting

PSDB;

2003-743764/70.)B; ADC24126.

Example 1: SEO ID NO 2 67pp; English

The invention describes a polynucleotide sequence (I) encoding a Discosoma red fluorescent protein (DSRed) variant having a reduced propensity to oligomerise, comprising amino acid substitutions at the AB and/or AC interfaces of the wild-type DsRed sequence (S1) comprising 225 amino acids, given in the specification, where the substitutions result in reduced propensity of the DsRed variant to form tetramers. (I) is useful for detecting transcriptional activity by providing a host cells conatining a vector which comprises (I) operatively linked to an

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CC expression control sequence, and an unit to assay the variant fluorescent CC protein fluorescence, and assaying fluorescence of the variant CC fluorescent protein produced by (VII), where variant fluorescent protein fluorescence is indicative of transcriptional activity. A polymucleotide CC localisation or trafficking of a polypeptide of interest. A polypeptide CC localisation or trafficking of a polypeptide of interest. A polypeptide CC marker is useful as markers to identify the location and amount of a CC target protein produced, where the target protein is fused to the marker, as a complement to or alternative for the green fluorescent protein or CC its spectral variant, for detecting induction of transcriptions in CC which detects events as the function of the movement of fluorescent donors and acceptors towards or away from each other, for making CC fluorescent sensors for protein kinase and phosphatase activities or CC indicators for ions and molecules such as Ca2+, Zn2+, for identifying the GC interaction of a first and second molecule, for determining whether a cc sample contains an enzyme or for determining the pH of the sample. (I) is useful for identifying a region or condition that regulates the activity of an expression control sequence. This sequence encodes Discosoma wild-type red fluorescent protein.
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ATAACAAGCCACAACGAAGACTATACAATCGTTGAGCAGTATGAAAGAACCGAGGGACGC
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Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               genotoxic and/or cytotoxic substances in complex environmental genotoxic and/or cytotoxic substances in complex environmental contaminants, especially organic compounds, but also (non-)ionising radiation and chemical carcinogens. Particular applications are in monitoring (waste) water (e.g. as an early warning system), medical toxicology screening and for industrial process control. The present sequence is a marker gene suitable for use in the cassettes of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                and a cytotoxicity cassette, each comprising a promoter and reporter gene, both of which are different in the two cassettes. The modified yeast strain is used to detect environmental pollution, especially
                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The present invention relates to a modified yeast strain that contains, integrated stably and functionally in its genome, a genotoxicity casset
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Disclosure; Page 20-21; 34pp; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                environment, contains cytotoxic compounds.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (LICH/) LICHTENBERG-FRATE H.
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   CACAATACCGTAAAGCTTAAGGTAACCAAGGGGGGACCTTTGCCCATTTGCTTGGGATATT
                                                                                                                 ACGGTCAATGGGCACGAGTTTGAAATAGAAGGCGAAGGAGAGGGGAGGCCATACGAAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                          859 BP;
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                                                                                                                                        Discosoma
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kinase; red fluorescent pro
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Novel chimeric phosphorylation indicators, useful for detecting kinase/phosphatase in samples, has donor molecule, phosphorylatable domain, phosphoaminoacid binding domain, and acceptor molecule, in

The present invention relates to chimeric phosphorylation indicators comprising a phosphorylation polypeptide and a fluorescent protein or operative linkage, a donor molecule, a phosphorylatable domain, a phosphoaminoacid binding domain (PAABD) and an acceptor molecule. The phosphorylation indicators of the invention are useful for detecting kinases or phosphatases in a biological sample. They are also useful high throughput analysis e.g. for detecting a kinase inhibitor or phosphatase inhibitor. The present sequence is Discosoma species red fluorescent protein (RFP) encoding DNA used in the invention or in ij

228 G; 205 T; ou; 0 Other;

Score 678; DB 7; 1 Pred. No. 8.2e-208; Mismatches Length 859; Indels 0; Gaps 0

GACGGTGGCGTTCGTTACTGTAACCCAGGATTCCAGTTTTGCAGGATGGCTGTTTCCATCTAC GACTATAAAAAGCTGTCATTTCCTGAAGGATTTAAATGGGAAAGGGTCATGAACTTTGAA TTGTCACCACAATTTCAGTATGGAAGCAAGGTATATGTCAAGCACCCTGCCGACATACCA CACAATACCGTAAAGCTTAAGGTAACCAAGGGGGGACCTTTGCCATTTGCTTGGGATATT ACGGTCAATGGGCACGAGTTTGAAATAGAAGGCGAAGGAGAGGGGGAGGCCATACGAAGGC ATGAGGTCTTCCAAGAATGTTATCAAGGAGTTCATGAGGTTTAAGGTTCGCATGGAAGGA ATAACAAGCCACAAGACGAAGACTATACAATCGTTGAGCAGTATGAAAGAACCGAGGGACGC TACATGGCAAAGAAGCCTGTGCAGCTACCAGGGTACTATGTTGACTCCAAACTGGAT ATTCATAAGGCTCTGAAGCTGAAAGACGGTGGTCATTACCTAGTTGAATTCAAAAGTATT ATTCATAAGGCTCTGAAGCTGAAAGACGGTGGTCATTACCTAGTTGAATTCAAAAGTATT ATGGGCTGGGAAGCCAGCAGCTGAGCGTTTGTATCCTCGTGATGGCGTGTTGAAAGGAGAG ATGGGCTGGGAAGCCAGCACTGAGCGTTTGTATCCTCGTGATGGCGTGTTGAAAGGAGAG AAGGTCAAGTTCATTGGCGTGAACTTTCCTTCCGATGGACCTGTTATGCAAAAGAAGAAGACA GACTATAAAAAGCTGTCATTTCCTGAAGGATTTAAATGGGAAAGGGTCATGAACTTTGAA TTGTCACCACAATTTCAGTATGGAAGCAAGGTATATGTCAAGCACCCTGCCGACATACCA CACAATACCGTAAAGCTTAAGGTAACCAAGGGGGGACCTTTGCCATTTGCTTGGGATATT ACGGTCAATGGGCACGAGTTTGAAATAGAAGGCGAAGGAGAGAGGGGGAGGCCATACGAAGGC ATGAGGTCTTCCAAGAATGTTATCAAGGAGTTCATGAGGTTTAAGGTTCGCATGGAAGGA ATAACAAGCCACAACGAAGACTATACAATCGTTGAGCAGTATGAAAGAACCGAGGGACGC TACATGGCAAAGAAGCCTGTGCAGCTACCAGGGTACTACTATGTTGACTCCAAACTGGAT CGTTACTGTAACCCAGGATTCCAGTTTGCAGGATGGCTGTTTCATCTAC 660 600 593 533 480 473 420 413 360 353 300 293 180 173 120 113

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Best Local Similarity
Matches 678; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The invention relates to a non-oligomerising fluorescent protein containing a mutation that reduces or eliminates its ability to oligomerise. The fluorescent protein gives more reliable fluorescence resonance energy transfer results and are useful to detect molecule interaction, enzymes, or sample pH. These are also used to identify agents or conditions that regulate expression of control sequences. The present sequence is Discosoma sp. red fluorescent protein (RFP) cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Fluorescent proteins containing a mutation that reduces or eliminates its ability to oligomerize which gives more reliable fluorescence resonance energy transfer results and are useful to detect molecule interaction, enzymes, or sample pH.
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(ZACH/) ZACHARIAS D
(BAIR/) BAIRD G S.
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                                                                                  CACAATACCGTAAAGCTTAAGGTAACCAAGGGGGGACCTTTGCCATTTGCTTGGGATATT
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                      Simultaneously quantifying in situ the relationship between an enzyme its substrate for study of enzymatic processes at a cellular level, comprises optical measurements on cells expressing the fluorescently
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Fluorescently-tagged enzyme; substrate; cell population; GPP; quantification of enzymatic activity; green fluorescent protein; red fluorescent protein; RPP; enhanced green fluorescent protein; enzymatic process; cellular enzyme; chemotherapeutic drug;
                                                                                                                                                                                                                                                                                                                        01-MAR-2001; 2001US-00797496
                                                                                                                                                                                                                                                                                                                                                                          01-MAR-2001; 2001US-00797496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Plasmid DNA containing coding sequence for RFP
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                                                                                                                                   WPI; 2003-555145/52.
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21pp; English
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The present invention relates to a method for simultaneously quantifying CC in situ the relationship between a fluorescently-tagged enzyme (E) and CC its substrate in a population of cells. A population of cells expressing CC (E) is created in which different cells contain different amounts of (E). The cells are incubated with a substrate, and the concentration and CC enzymatic activity of (E) in each cell are simultaneously quantified by Optical means. The fluorescently-tagged enzyme is produced by linking the CC variants or derivatives such as red fluorescent protein (GFP), or its CC variants or derivatives such as red fluorescent protein (GFP) and CC enhanced green fluorescent protein (GFP). The method of the invention is CC useful for simultaneously quantifying in situ the relationship between an CC enzyme and its substrate in a cell. The method is useful for the study of CC enzymatic processes at the cellular level, and especially for examining CC enzymatic processes at the cellular level, and especially for examining CC the interactions of cellular enzymes with chemotherapeutic drugs, e.g. CC for elucidating mechanisms of multidrug resistance (MDR). The present CC sequence represents a plasmid containing the coding sequence for RFP

Sequence 3311 BP; 858 A; 778 C; 860 G; 815 T; 0 U; 0 Other;

Length 3311;

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Query Match Best Local Similarity Matches 677; Conserv

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                                                ACGGTCAATGGGCACGAGTTTGAAATAGAAGGCGAAGGAGGGGAGGCCATACGAAGGC 120
CACCATCTGTTCCTTTA
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                                                                                                                                                                                                      ATTCATAAGGCTCTGAAGCTGAAAGACGGTGGTCATTACCTAGTTGAATTCAAAAGTATT
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              677
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; Pred. No. 3.4e-207;
resumantches 0; Indels
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RESULT 10
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ID ABL61
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XX ABL61
XX Alpha
XX Alpha
XX Alpha
XX III-JI
PN EP117
XX III-JI
PR Odent
XX WPI;
XX Odent
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   New nucleic acid containing regulatory region of the smooth muscle gene, useful e.g. for manipulating gene expression in smooth muscle
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31-OCT-2000; 2000DE-01053879.
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This invention describes a novel nucleic acid (I) comprising: (i) at least one functional region (Ia) from the regulatory region of the alphasmooth muscle actin (SMA) gene and (i) at least one additional functional sequence (Ib) operably linked to (Ia). The products of the invention can be used for preparing genetically modified eukaryotic cells or organisms, for isolation and screening of smooth muscle cells, myofibroblasts or related cells, and for manipulation of gene expression and/or cell function in smooth muscle cell or myofibroblasts or related cells, one cell or myofibroblasts or gene therapy. Component (Ia) provides cell-type- or differentiation-specific expression or modulation of genes. This sequence represents a DNA fragment of red fluorescent protein (EGFP) which can be used as a reporter molecule under the control of the alpha-SMA described in the invention 0 Other;

Sequence 666 BP; 202 A; 126 C; 176 G; 162 T; 0 U;

5 밁 ঠ 밁 δ Ś 밁 Matches Query Match Best Local Similarity 193 121 181 133 665; 61 13 73 TTTCAGTATGGAAGCAAGGTATATGTCAAGCACCCTGCCGACATACCAGACTATAAAAAG AAGCTTAAGGTAACCAAGGGGGGACCTTTGCCATTTGCTTGGGATATTTTGTCACCACAA AAGCTTAAGGTAACCAAGGGGGGACCTTTGCCATTTGCTTGGGATATTTTGTCACCACAA CACGAGTTTGAAATAGAAGGCGAAGGAGGGGGAGGCCATACGAAGGCCACAATACCGTA CACGAGTTTGAAATAGAAGGCGAAGGAGAGGGGAGGCCATACGAAGGCCCACAATACCGTA Conservative 100.0%; 98.1%; Score 665; DB 6; L; Pred. No. 1.1e-203; 0; Mismatches Length 666 Indels <u>,</u> Gaps 240 252 180 192 120 69

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949

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RESULT 11
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AC AAD03
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19-JUN-2001
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99US-004149122.
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99US-00457556.
99US-004577898.
99US-00458144.
99US-004581477.
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/product= "Chromo/fluorescent protein, drFP583 (NFP-6)"
/transl except= (pos:540. .600, aa:Leu-Gly)
/note= "Insertion of 60 bases alters the reading frame"
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Best Local &
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14-JUN-2000;
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14-JUN-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The present sequence is a Discosoma sp. red chromo/fluorescent protein, drFP583 (NFP-6) cDNA. NFP-6 is present in an environment other than its natural environment and has an absorbance maximum ranging from 250nm to 750nm and more usually from 540nm to 580nm and emission maximum ranging from 275nm to 775nm and more usually from 565 to 605nm. The chromoproteins or fluorescent proteins are useful as labels in analyte detection assays, as selectable markers in recombinant DNA applications, as biosensors in prokaryotic and eukaryotic cells e.g. as pH indicator and as in vivo markers in animals. They are also useful in sunscreens and as selective filters. (Updated on 11-SEP-2003 to standardise OS field)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      An Anthozoa chromo- or fluorescent protein (P1) present in an environment other than its natural environment, useful as a label in analyte detection assays and as a selectable marker in recombinant DNA
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                                                                                                                          AAGGTCAAGTTCATTGGGGTGAACTTTCCTTCCGATGGACCTGTTATGCAAAAGAAGACA
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                                                 ATGGGCTGGGAAGCCAGCACTGAGCGTTTGTATCCTCGTGATGGCGTGTTGAAAGGAGAG
                                                                                          AAGTCAAGTTCATTGGCGTTGAACTTTCCTTCCGATGGACCTGTTATGCAAAAGAAGACA
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                        The present sequence is the cDNA sequence of drFP583 from Discosoma sp. "red", a non-bioluminescent species of the Class Anthozoa. drFP583 is a full-length cDNA encoding a novel fluorescent protein (nFP). Fluorescent proteins can be used in fluorescent labeling, a useful tool for marking a protein, cell or organism of interest. Unlike other markers used in protein labeling, such as beta-galactosidase and luciferase, fluorescent protein do not require an exogenous cofactor or substrate. Methods
proteins do not requi-
involving fluorescent
                                                                                                                                                                                                                                                                                  Novel fluorescent protein from non-bioluminescent useful for fluorescent labeling and as markers.
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14-OCT-1999;
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                                                                                                                                                                                                                                 73-74; 86pp;
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99US-00418529.
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/transl_except= (pos:470. .473,aa:Val)
/note= "The codon at position 456. .457 has an apparent nucleotide deletion which alters the reading frame. The codon at position 470. .473 has an apparent 1 nucleotide insertion which corrects the altered reading frame"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers 93. .770
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Best Local
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CACCATCTGTTCCTTTAA
                  CACCATCTGTTCCTTTAA 678
                                                                    ATAACAAGCCACAACGAAGACTATACAATCGTTGAGCAGTATGAAAGAACCGAGGGACGC
                                                                                                                           TACATGGCAAAGAAGCCTGTGCAGCTACCAGGGTACTACTATGTTGACTCCAAACTGGAT
                                                                                                                                                                                                                                ATGGGCTGGGAAGCCAGCACTGAGCGTTTGTATCCTCGTGATGGCGTGTTGAAAGGAGAG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
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98.1%;
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This cDNA encodes a fluorescent protein (dmFP592) from Discosoma sp.

"magenta", a non-bioluminescent species of the genera Anthozoa. The
fluorescent colour is observed under usual white light or ultraviolet
light. It has an absorbance maximum at 573 nm and an emmision maximum at
593 nm. The polynucleotides of the invention can be used to produce the
proteins recombinantly, and as a source of primers and probes for
identifying related proteins. The fluorescent proteins have applications
in fluorescent labeling, as fluorescent markers for gene expression and
protein localization studies, and in fluorescence resonance energy
transfer (FRET) reactions. They may have improved properties and better
suitability for larger excitations, compared to prior art fluorescent
proteins such as green fluorescent protein from Aequorea victoria, which
has an excitation maximum at 395 nm, a second excitation peak at 475 nm
                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Novel fluorescent protein from non-bioluminescent Discosoma species, useful for fluorescent labeling and as markers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11-DEC-1998;
19-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 dmFP592; fluorescent
fluorescence resonance
                                                                                                                                                                                                                                                                                                                                                  Sequence 876 BP; 256 A; 165 C; 232 G; 223 T; 0 U;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2000-423379/36.
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                                                                                                                                    CACAATACCGTAAAGCTTAAGGTAACCAAGGGGGGACCTTTGCCATTTGCTTGGGATATT
                                                                                                                                                                                              ACGGTCAATGGGCACGAGTTTGAAATAGAAGGCGAAGGAGAGAGGGGAGGCCATACGAAGGC 120
                                                                                                                                                                                                                                ATGAGTTGTTCCAAGAATGTGATCAAGGAGTTCATGAGGTTCGAAGGTTCGTATGGAAGGA
                                                                                                                                                                                                                                                                ATGAGGTCTTCCAAGAATGTTATCAAGGAGTTCATGAGGTTTAAGGTTCGCATGGAAGGA
                                                                          TTGTCACCACAATTTCAGTATGGAAGCAAGGTATATGTCAAGCACCCTGCCGACATACCA
                                                                                                                CACTGTTCCGTAAAGCTTATGGTAACCAAGGGTGGACCTTTGCCATTTGCTTTTGATATT
                                                        TTGTCACCACAATTTCAGTATGGAAGCAAGGTATATGTCAAACACCCTGCCGACATACCA
 GACTATAAAAAGCTGTCATTTCCTGAGGGATTTAAATGGGAAAGGGTCATGAACTTTGAA
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                                                                                                                                                                                                                                                                                            Conservative
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resonance energy transfer reaction; FRET;
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99US-00444341.
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/product= "fluorescent_protein"
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                                                                                                                                                                                                                                                                                                        Score 566.4; DB 3; Pred. No. 8.3e-172;
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10-DEC-1999;
14-JUN-2000;
14-JUN-2000;
14-JUN-2000;
14-JUN-2000;
14-JUN-2000;
14-JUN-2000;
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                                                                                                                               09-DEC-1999
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19-JUN-2001
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 99US-00457898.
99US-00458144.
99US-00458477.
99WO-US029405.
2000US-0211607P.
2000US-0211609P.
2000US-0211627P.
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13-OCT-2000; 2000WO-US028477
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                                                                                                                                                                                                                                                                                                                                                                                                                        pH indicator; invivo marker; selective filter; ss
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(first en
                                                                                                                                                                                                                                                                                                                                                                                      magenta.
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                                                            99US-00418529.
99US-00418917.
99US-00418922.
99US-00457556
                                        99US-00444338
                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                               /product= "Chromo/fluorescent protein,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                 fluorescent protein; dmFP592; NFP-9; sunscreen; selectable marker; recombinant DNA application;
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14-JUN-2000;
14-JUN-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The present sequence is a Discosoma sp. magenta chromo/fluorescent protein, dmsP592 (NFP-9) cDNA. NFP-9 is present in an environment other than its natural environment and has been an environment other are than its natural environment and solution as an emission maximum ranging from 375nm to 775nm and more usually from 560nm to 590nm and emission maximum ranging from 395nm to 795nm and more usually from 580 to 610nm. The chromoproteins or fluorescent proteins are useful as labels in analyte detection assays, as selectable markers in recombinant DNA applications, as biosensors in prokaryotic and eukaryotic cells e.g. as pH indicator and as in vivo markers in animals. They are also useful in sunscreens and as selective filters. (Updated on 11-SEP-2003 to standardise OS field)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 13; Fig 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         detection
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                                                                                                                                                                                                                               GACGGTGGCGTCGTTACCTGTAACCCAGGATTCCAGTTTTGCAGGATGGCTGTTTCCATCTAC
                                                                                                          ATGGGCTGGGAAGCCACTGAGCGTTTGTATCCTCGTGATGGCGTGTTGAAAGGAGAG
                                                                                                                                                                                                                                                                                                    GACTATAAAAAGCTGTCATTTCCTGAAGGATTTAAATGGGAAAGGGTCATGAACTTTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                     CACAATACCGTAAAGCTTAAGGTAACCAAGGGGGGGACCTTTGCCATTTGCTTGGGATATT
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   TACATGGCAAAGAAGCCT---
                                ATCCATATGGCTCTGAGGCTGGAAGGAGGCGGCCATTACCTCGTTGAATTCAAAAGTATT
                                                ATTCATAAGGCTCTGAAGCTGAAAGACGGTGGTCATTACCTAGTTGAATTCAAAAGTATT
                                                                                        CGGGGCTGGGAAGCCAGCTCTGAGCGTTTGTATCCTCGTGATGGGGTGCTGAAAGGAGAC
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; 2000US-0211880P.
; 2000US-0211888P.
; 2000US-0212070P.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Novel eukaryotic chromosome comprising one or many att sites which permits site-directed integration in the presence of lambda-integrase, useful for site-specific recombination-directed integration of DNA of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Stewart
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              30-MAY-2001; 2001US-0294758P.
21-MAR-2002; 2002US-0366891P.
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platform artificial chromosome expression system; gene; ds
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       29-MAY-2003
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            interest.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (CHRO-) CHROMOS MOLECULAR SYSTEMS INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                site;
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Example 1; Page 191-192; 272pp; English

CC chromosome, and permits site-directed integration in the presence of CC lambda-integrase. Also described: (1) a platform artificial chromosome CC expression system (ACes) (II) comprising several sites that participate CC in recombinase catalysed recombination; and (2) a method (M1) for CC chromosome. (I) can be used in gene therapy. (M1) is useful for cc introducing a heterologous nucleic acid into a platform artificial CC chromosome. (I) can be used in gene therapy. (M1) is useful for producing a heterologous nucleic acid molecule into a platform CC artificial chromosome, preferably an ACes. (II) is useful for producing a CC artificial chromosome, preferably an ACes. (II) is useful for producing a CC mammal) by introducing (II) by cell fusion, lipid-mediated transfection CC mammal) by introducing (II) by cell fusion, electroporation, CC microprojectile bombardment or direct DNA transfer into an embryonic CC cell, preferably a stem cell or an embryo. (II) comprises a heterologous culcic acid that encodes a therapeutic product which is useful for CC making a library of ACes comprising random portions of a genome. ACC44612 CC conference of the ABP96650 to ABP96657 represent sequences used in the exemplification present or sever several att sites, where an att site is heterologous to of the present invention chromosome (I) comprising to the ACC44612

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):29	-	7	TAC	TAT	GCAG:	GAG	GGA	GAC	SCGT	CGT	TTT	CTTT	CAA	CAG	rgag:	GAA(AAGC!	AGC CO	ACC:	ACC:	ATA	ATA	CAAG	CAAG	re 5 1. No Misma	32 G;
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			CAGT	CAGT	TATE	PACT	CICG	CTAG	GATG	GATG	CCIG	CCIG	AAAG	CAGG	AAAA	GAAA	AAAC	AAGC	TIGC	TIGO	GAAG	GAGG	TTCA	TTTA	Le	0
			ATGA	ATGA	ATGT	ATGT	TTGA	TTGA	GGGT	GCGT	TTAT	TTAT	ACGG	ATGG	GGT	GGT	ACCC	ACCC	CATT	CATT	GGAG	GGAG	AGGT	AGGT	Length Indels	Othe
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			AGGG	AGGG	AACT	AACT	GTAT	GTAT	GAGA	GAGA	GGAC	AGAC	TCTA	TCTA	TTGA	TTGA	TACC	TACC	ATAT	ATAT	AAGG	AAGG	AAGG	AAGG	Gaps	
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